

Q3 2022

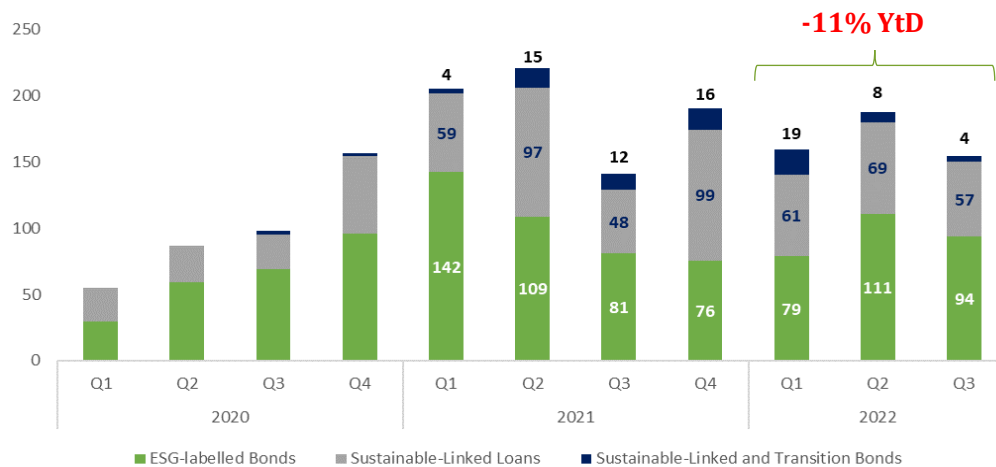
# ESG Finance Report

European Sustainable Finance

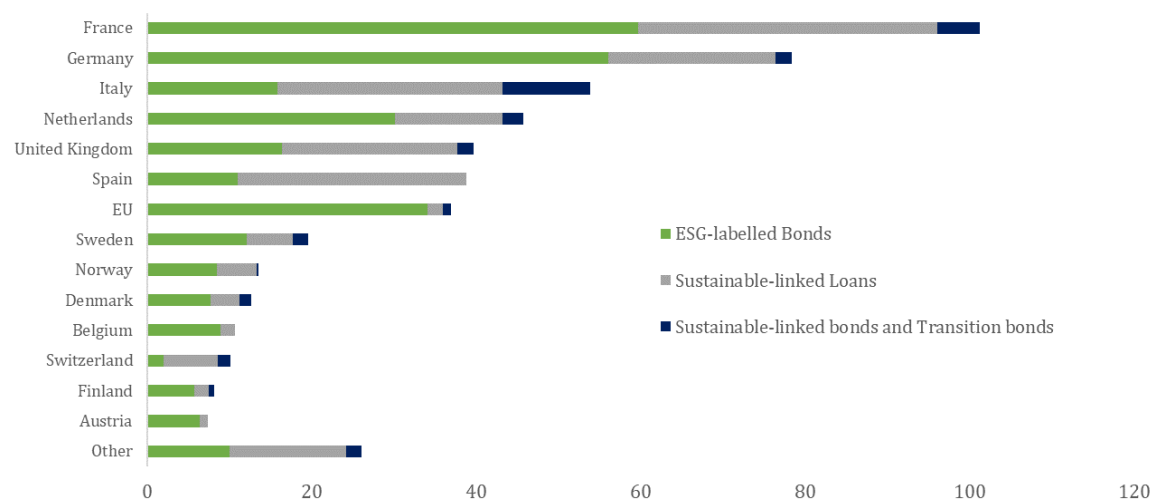


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## 1.1 European ESG Bond and Loan Issuance 2020-2022 (Q3)



## 1.2 European ESG Bond and Loan Issuance by Country: EURbn (2022 YtD Q3)



Source: Dealogic

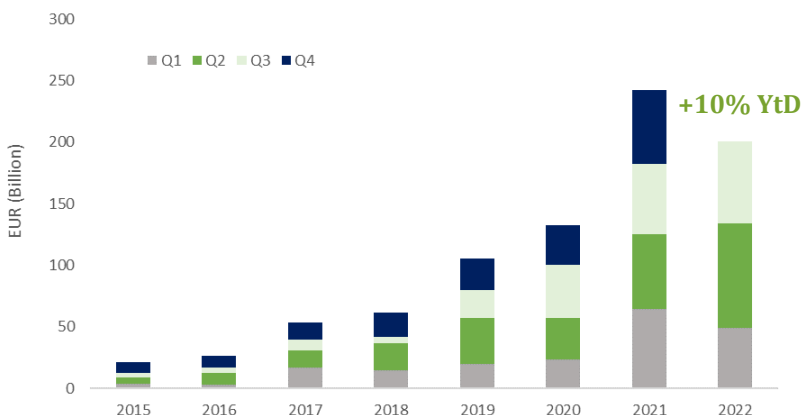
In Q3'22, European ESG bond and loan issuance accumulated a total of €155bn in proceeds, bringing the total year-to-date issued amount to €502bn.

ESG bonds and loans include ESG-labelled bonds (proceeds-based), sustainable-linked bonds, transition bonds, green-linked loans and sustainable-linked loans.

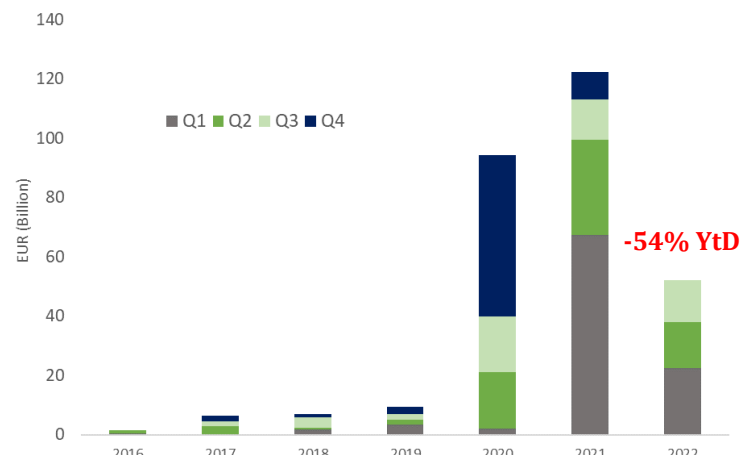
The total supply of ESG bond and loan issuance has declined 11% YtD, predominantly driven by lower social and sustainable bond issuance.

French issuers continued to lead in total ESG bond and loan issuance, followed by German issuers.

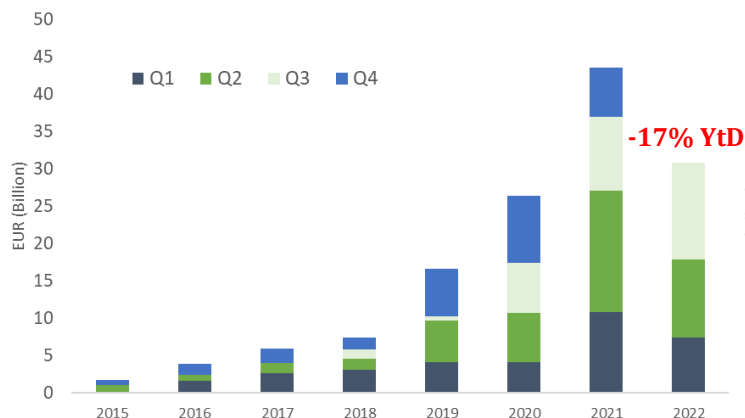
### 1.3 European Green Bond Issuance



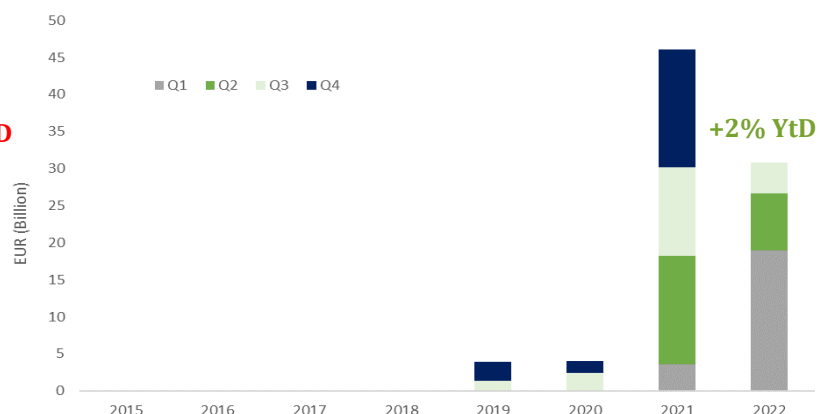
### 1.4 European Social Bond Issuance



### 1.5 European Sustainable Bond Issuance



### 1.6 European Sustainable-linked and transition Bond Issuance



Source: Dealogic

ESG-labelled bond issuance which comprises Green, Social and Sustainable bonds, accumulated €94bn in proceeds in Q3 2022 (€284bn YtD).

Green bond issuance stands out as the ESG sub asset class that has grown the most during the year, accumulating an increase of 10% YtD notwithstanding the wider market turbulence. The increase in green bond issuance has been driven by the corporate sector, with a 15% YtD increase. The sovereign sector has continued to participate in the green bond market, with Austria and Denmark originating inaugural green sovereign bonds during the year and the continuation of green bond programmes by the EU and some European sovereigns.

Social bond issuance has accumulated a decline of 54%YtD, following the sharp slowdown in Social bond issuance by the European Commission. The strong participation of the French agency CADES has not offset the contraction in Commission Social bond issuance.

Sustainable bond issuance has declined 17%YtD, which is of similar proportion than the wider market contraction in non-ESG bonds during the year.

Sustainable-linked bond issuance continued to decelerate in Q3'22 following a sequence of record volumes observed in Q4'21 and in Q1'22. Total YtD issuance has accumulated an increase of 2%, predominantly driven by the strong issued amount in Q1'22.

## Top single ESG bond issues by amount in 2022 YtD

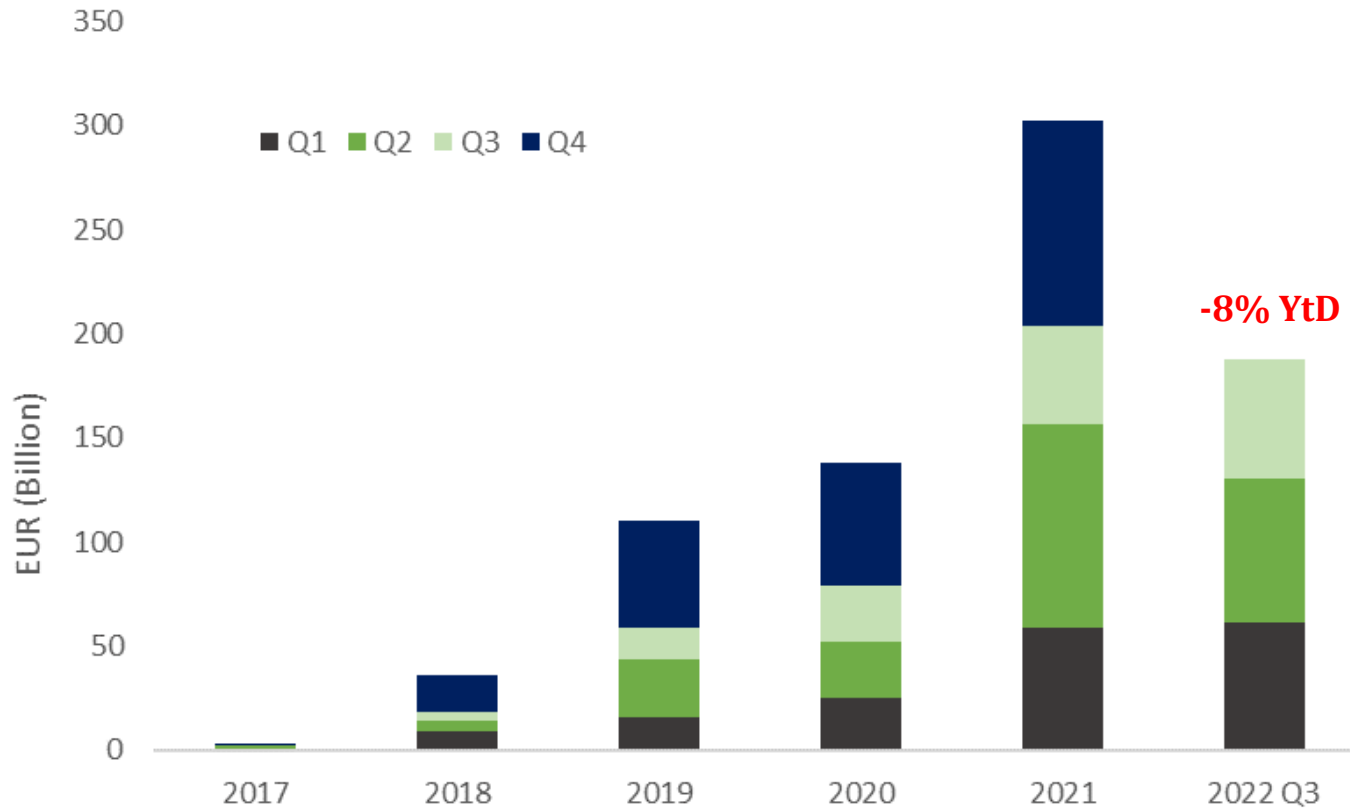
Environmental	Amount (EUR)	Maturity date	ISIN
European Union	6.0	04-Feb-43	EU000A3K4DG1
Italy	6.0	30-Apr-35	IT0005508590
United Kingdom	5.0	31-Jul-53	GB00BM8Z2V59
European Union	5.0	04-Feb-48	EU000A3K4DM9
State of the Netherlands	5.0	15-Jan-40	NL0013552060
Federal Republic of Germany	4.8	15-Oct-27	DE0001030740
Social	Amount EUR (bn)	Maturity date	ISIN
CADES	6.0	19-Jan-32	FR0014007RB1
CADES	5.0	25-May-32	FR001400A3H2
CADES	5.0	25-Nov-32	FR001400CVE3
CADES	3.3	17-May-25	US12802D2J49 XS2480532915
CADES	3.0	25-Nov-27	FR001400CHC6
CADES	2.6	26-Jan-32	US12802D2H82 XS2436433333
Sustainability	Amount (EUR)	Maturity date	ISIN
European Investment Bank - EIB	4.0	15-Nov-27	US298785JT41
BNG	1.8	12-Jan-32	XS2430965538
North Rhine Westphalia	2.0	15-Jun-32	DE000NRW0NF8
North Rhine Westphalia	1.5	14-Jun-52	DE000NRW0NG6
Agence Francaise de Developpement - AFD	1.5	25-May-32	FR001400ADF2
Action Logement Services	1.3	13-Apr-32	FR0014009N55

Source: Dealogic

During 2022, the sovereign sector has originated the largest single issues with deal amounts of €6bn to €5bn.

The French Caisse d'Amortissement de la Dette Sociale (CADES) continues to consolidate as a market leader for social bonds.

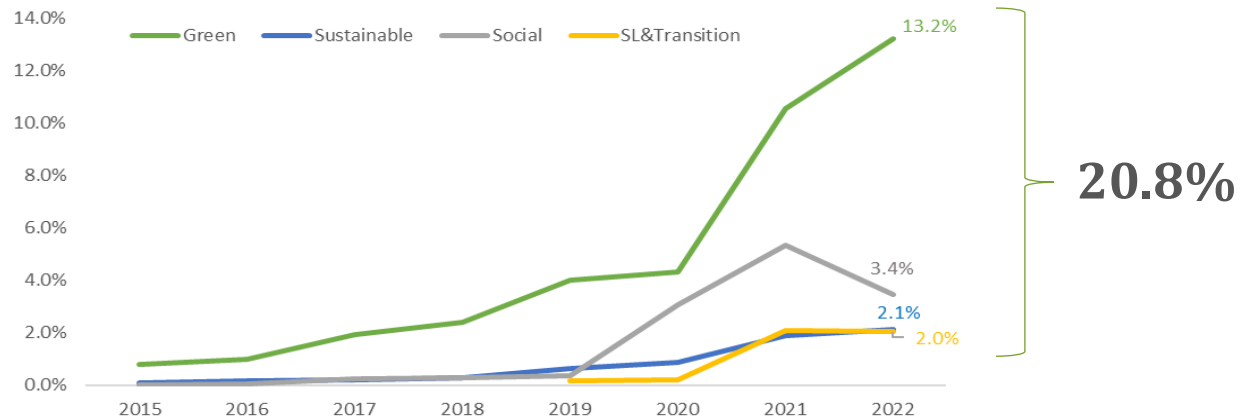
### 1.7 European sustainability-linked and Green-linked Loan Issuance 2017-2022 (Q3)



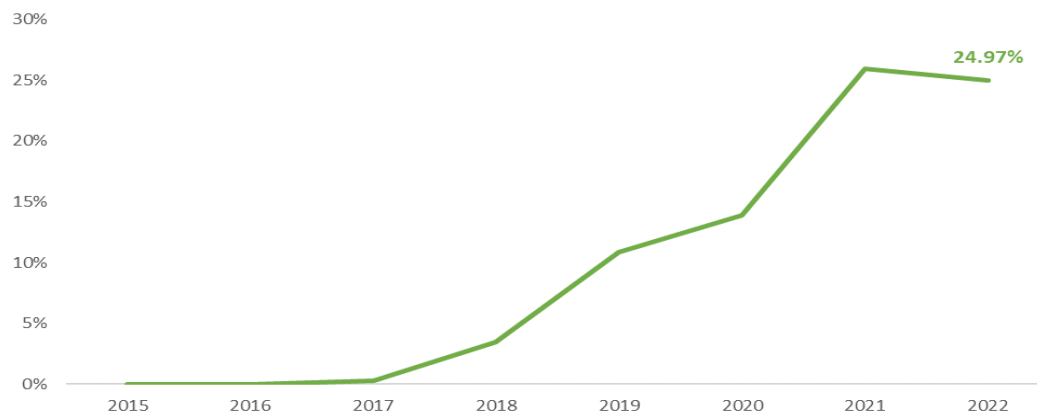
Sustainability-linked and green-linked loan origination has accumulated a decline of 8% YtD, with €187bn in proceeds during the year.



### 1.8 European ESG Bond Issuance as % of Total Bond Issuance



### 1.9 European Sustainability Linked and Green Loan Issuance as of Syndicated Loan Origination



\*ESG includes Environmental, Social and Sustainable  
Source: Dealogic

ESG bond issuance, including ESG-labelled, sustainable-linked and transition bonds, represented 20.8% of total European bond issuance during 2022YtD, a higher proportion from 19.9% in 2021 FY but up from 14.1% in Q2'22. This was comprised of 13.2% green bonds, 3.4% social bonds, 2.1% sustainable bonds, 2.0% of sustainable-linked and transition bonds [SeeChart1.8]

Sustainability-linked and Green-linked loan issuance represented 25% of total European syndicated loan origination during Q3 2022, down from 26% in FY 2021 [SeeChart1.9].

# Regulatory Update



2022

Q3

- Platform on Sustainable Finance's publishes report on Data and usability of the EU Taxonomy
- Platform on Sustainable Finance publishes draft report on Minimum Safeguards

Q4

- UN COP 27
- UN COP 15
- EU Green Bond Standard agreement expected
- European Commission adopts CRR ITS on ESG Pillar 3 disclosures
- European Commission to review EU Climate Transition Benchmarks and EU-Paris aligned Benchmarks
- Platform on Sustainable Finance publishes report with supplementary advice on methodology and technical screening criteria for the climate and environmental objectives of the EU Taxonomy
- ESAs launch call for evidence on greenwashing
- ESMA publishes final report on SFDR amendments for nuclear and gas
- ESMA launches consultation on guidelines for the use of ESG or sustainability-related terms in funds' names
- ESMA to consult on the review of PAIs indicators
- EBA to publish Guidelines on ESG risk management
- ECB to publish guidance on stress testing best practices
- FCA launches consultation on SDR disclosure requirements for asset managers and certain asset owners and on sustainable investment labelling
- UK Government to publish legislation on UK Green Taxonomy in relation to climate change mitigation and adaption
- UK Transition Plan Taskforce launches gold standard for transition plans and launches consultation

Q1  
2023

- European Commission to propose legislation on ESG ratings and data providers
- European Commission to adopt delegated act on criteria for other 4 EU Taxonomy objectives
- EFRAG to consult on draft sector specific and SME sustainability reporting standards
- ISSB to publish final sustainability reporting standards and consult on WP and SRS beyond climate
- ECB to publish first own climate report on corporate bond holdings
- G20/OECD to publish final updated principles on corporate governance

2023

\*Please note that the above is a selective list of initiatives and timelines are indicative and may be subject to change. For further details see AFME and Linklaters report [Sustainable Finance in Europe: Regulatory State of Play](#)

2023

Q2

- Commission to adopt sector agnostic sustainability reporting standards under the CSRD
- Commission to propose review of the Shareholders' Rights Directive
- ESAs to publish report on greenwashing and the implementation of the EU's sustainable finance policies
- ESAs to submit review of SFDR RTS
- EBA to publish report on prudential treatment of ESG assets (penalising/supporting factors)
- FCA to publish SDRs and investment labels rules
- TNFD to publish framework for nature-related financial disclosures

Q3

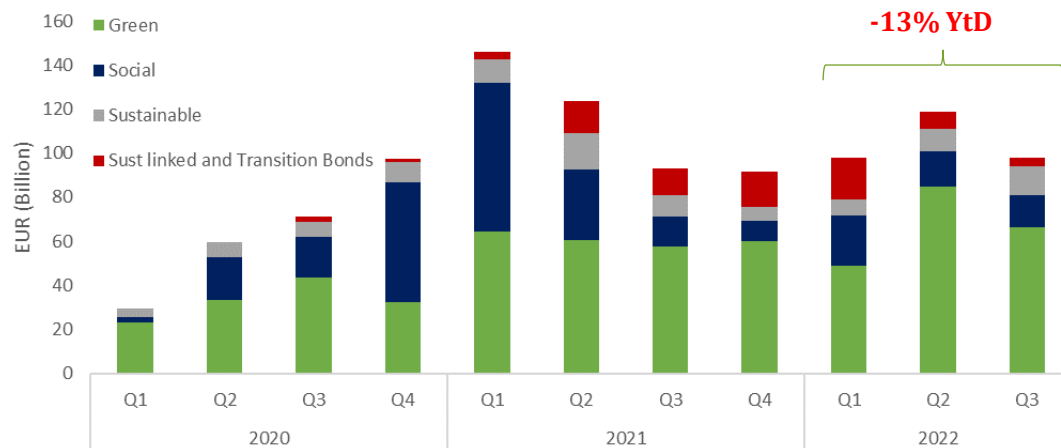
- TNFD to publish final recommendations on biodiversity-related disclosures
- G20/OECD to adopt updated principles on corporate governance

Q4

- European Commission to publish review report on the EU Taxonomy Regulation (TBC)
- European Commission to publish report on significant harm and social taxonomy (TBC)
- European Commission to publish report on the effectiveness of advisory procedures in TSC development (TBC)
- European Commission to publish RTS on specifications, governance, assessment methodologies and technical requirements for external reviewers and delegated acts on ESMA powers
- EFRAG to submit sector specific and SME sustainability reporting standard to European Commission
- IAASB to consult on draft standards for sustainability reporting assurance
- UK Government to publish TSC for remaining 4 objectives under the UK Green Taxonomy

# ESG Bond and Loan Issuance

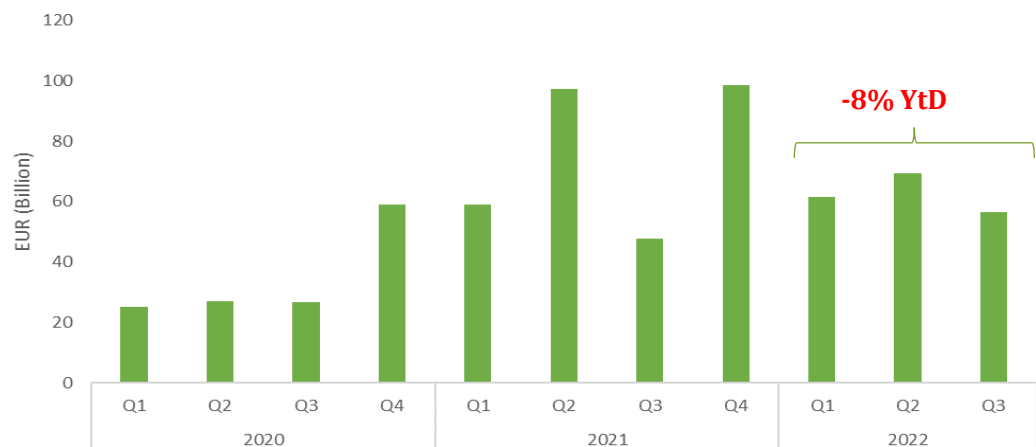
## 2.1 European ESG, sustainable linked, and transition bond issuance



In Q3 2022 ESG, sustainable-linked and transition bond issuance accumulated €314.5bn in proceeds, with 13% YtD decline.

Although Q2'22 and Q3'22 were correspondingly the highest and second-highest quarterly green bond issuance amounts on records, lower social bond issuance has resulted in lower ESG supply during the year.

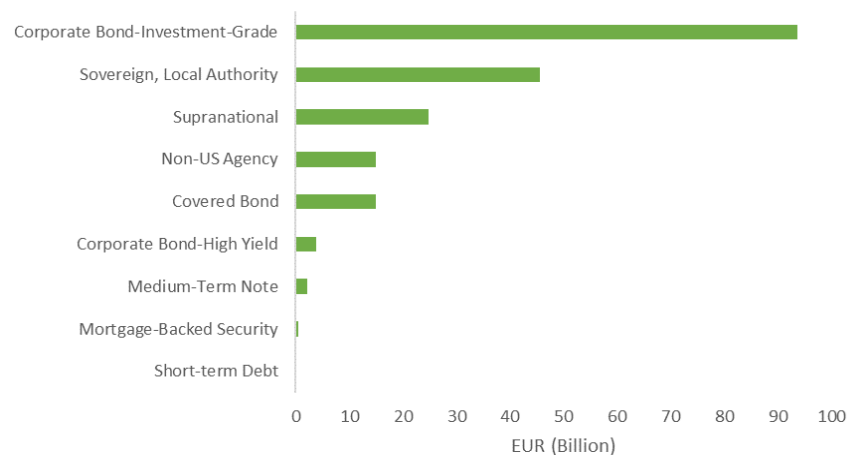
## 2.2 European sustainability linked and Green linked Loan Issuance



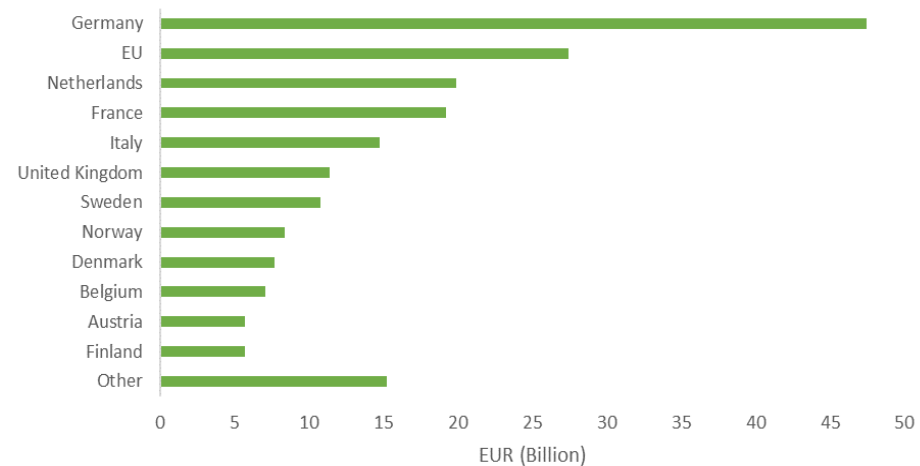
Source: Dealogic

ESG linked loans decreased 8% YtD compared to first three quarters of 2021, accumulating a total of €187.4bn in proceeds.

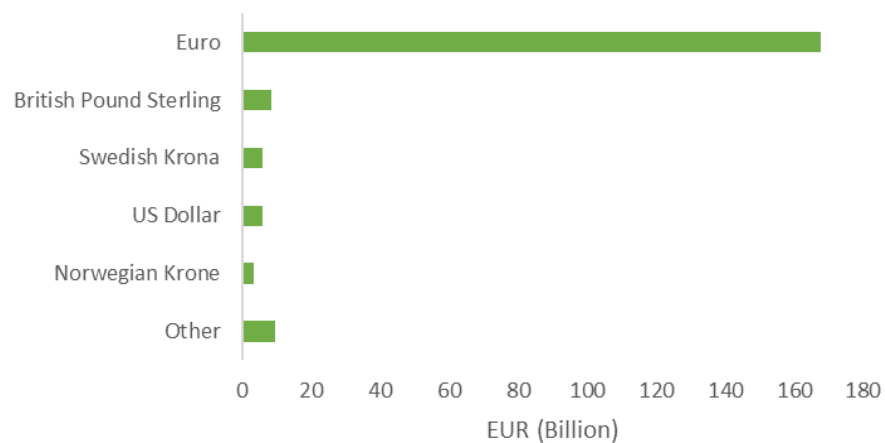
### 2.3 Green Bond Issuance by Deal Type 2022 YtD (Q3)



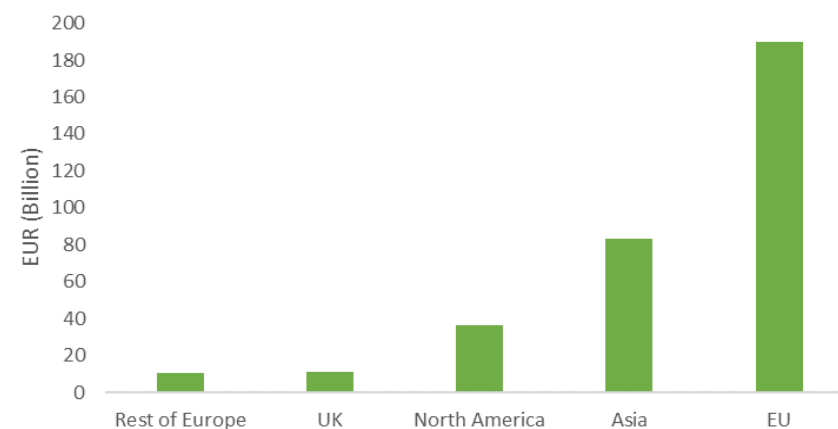
### 2.4 Green Bond Issuance by Country (top 10) 2022 YtD (Q3)



### 2.5 Green Bond issuance by Currency 2022 YtD (Q3)

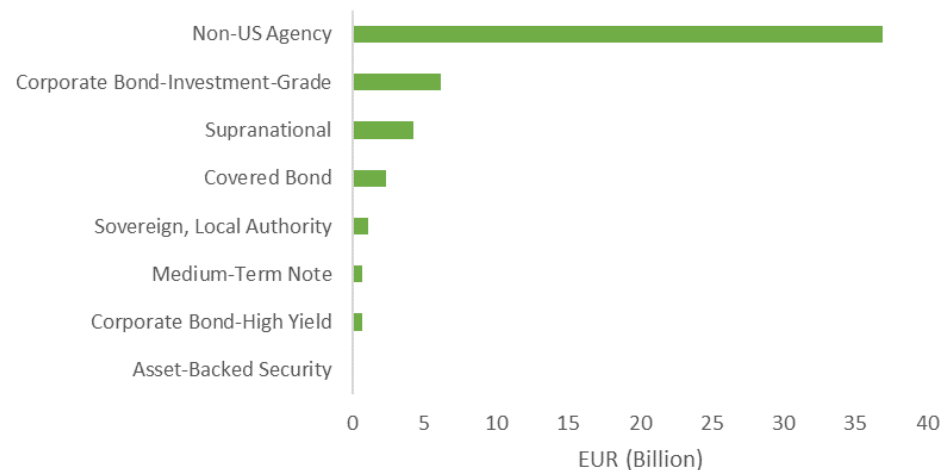


### 2.6 Green Bond Issuance Global Comparison 2022 YtD (Q3)

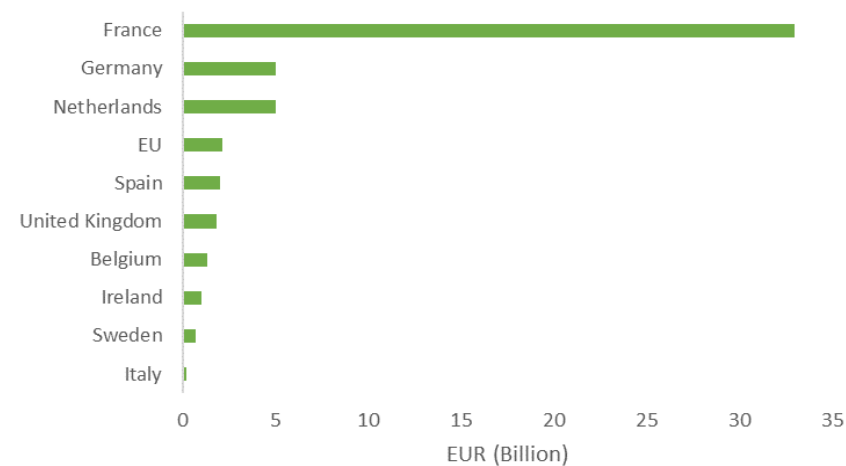


Source: Dealogic

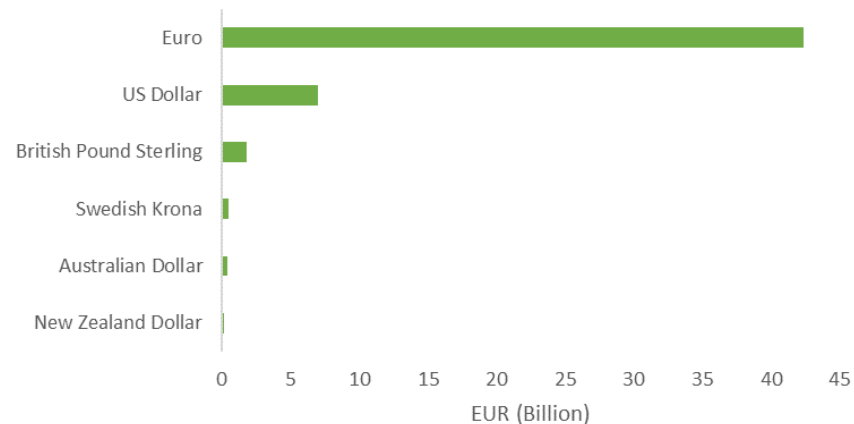
**2.7 Social Bond Issuance by Deal type: 2022 YtD (Q3)**



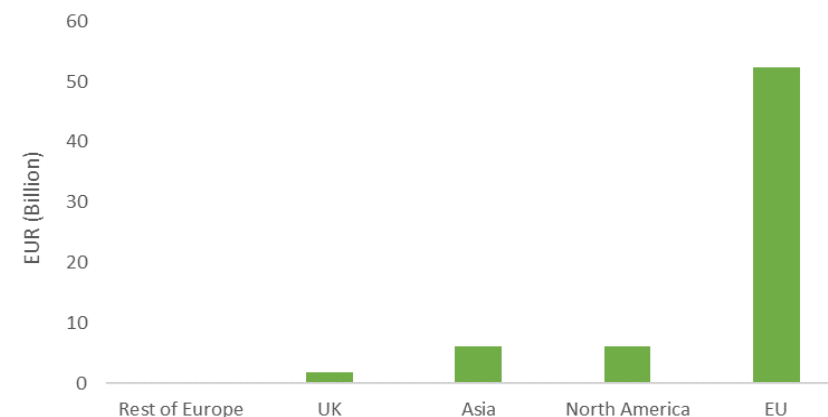
**2.8 Social Bond Issuance by Country: 2022 YtD (Q3)**



**2.9 Social Bond Issuance by Currency: 2022 YtD (Q3)**

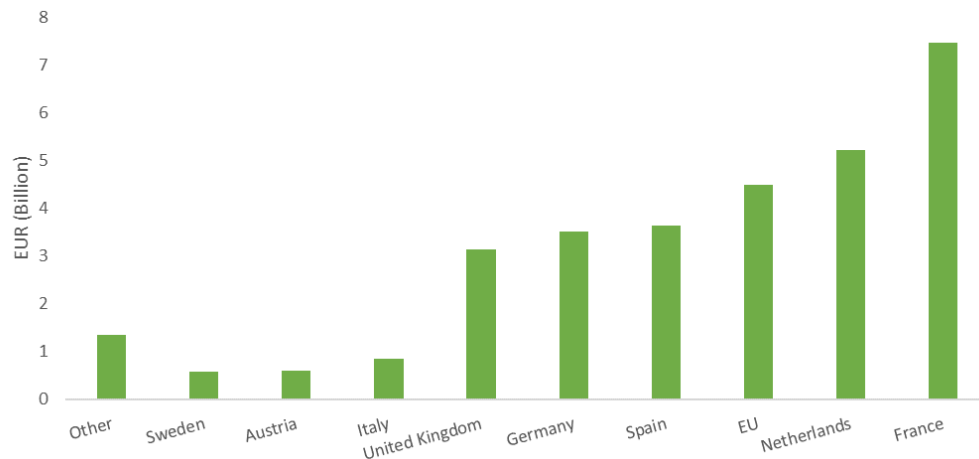


**2.10 Social Bond Issuance Global Comparison: 2022 YtD (Q3)**

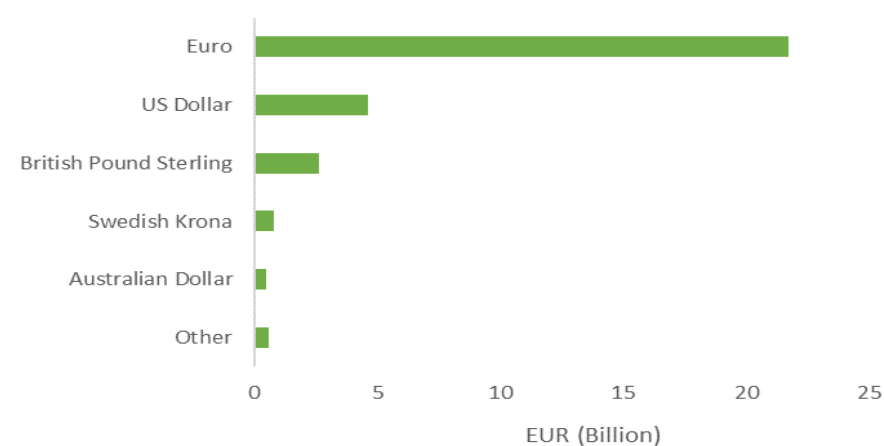


Source: Dealogic

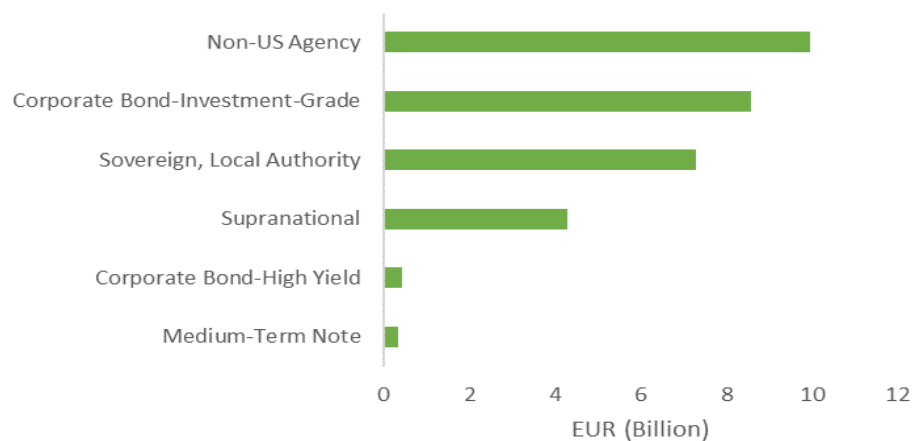
**2.11 Sustainable Bond Issuance by Country: 2022 YtD (Q3)**



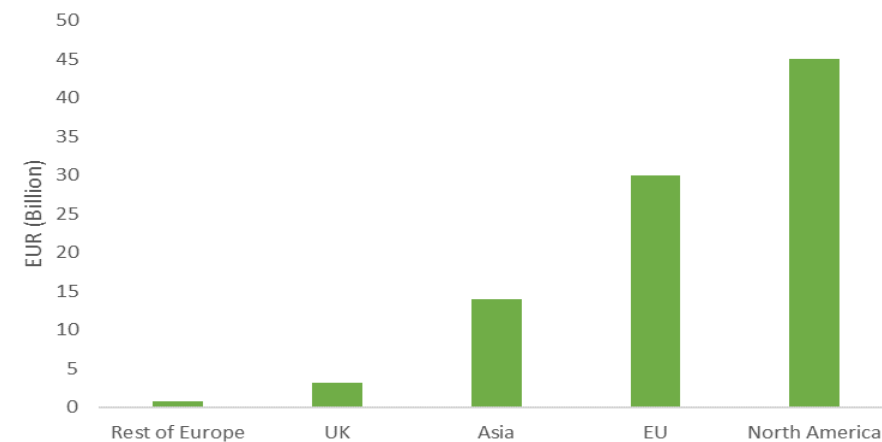
**2.12 Sustainable Bond Issuance by Currency: 2022 YtD (Q3)**



**2.13 Sustainable Bond Issuance by Deal Type: 2022 YtD (Q3)**



**2.14 Sustainable Bond Issuance Global Comparison: 2022 YtD (Q3)**



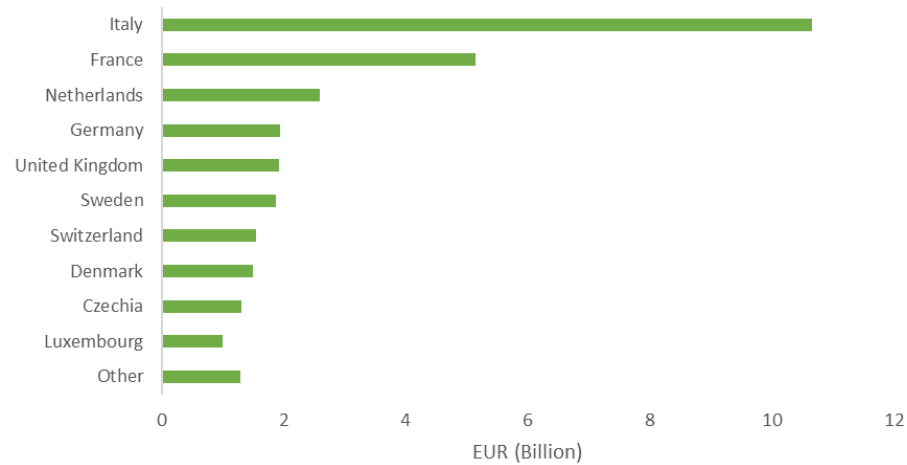
Source: Dealogic



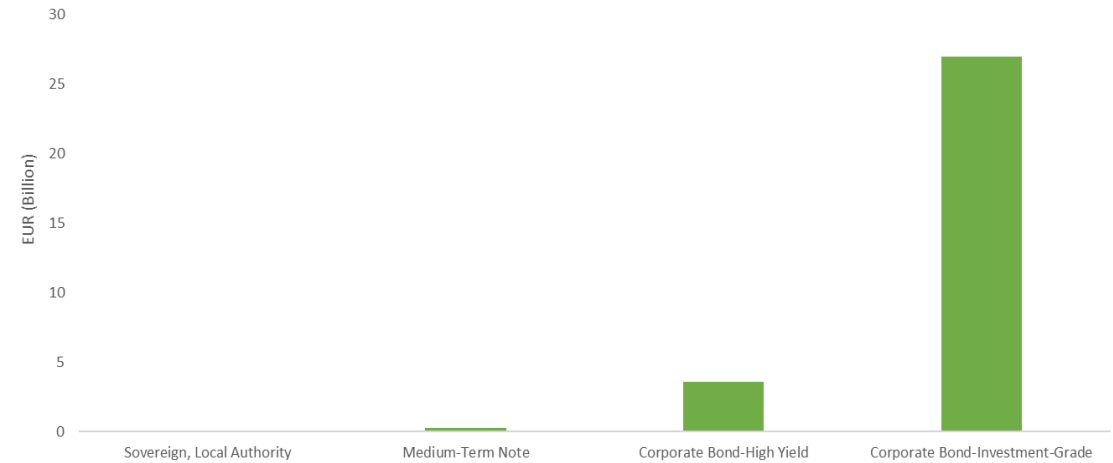
## Sustainable-linked and Transition Bond Issuance

Sustainable-linked bonds are performance-based bonds where payment is contingent on pre-determined KPIs which are aligned with sustainability strategies. Transition bonds are brown bonds issued by carbon intensive companies with the intention of starting to green their operations.

**2.15 European Sustainable-linked Bonds Issuance by Country: 2022 YtD (Q3)**

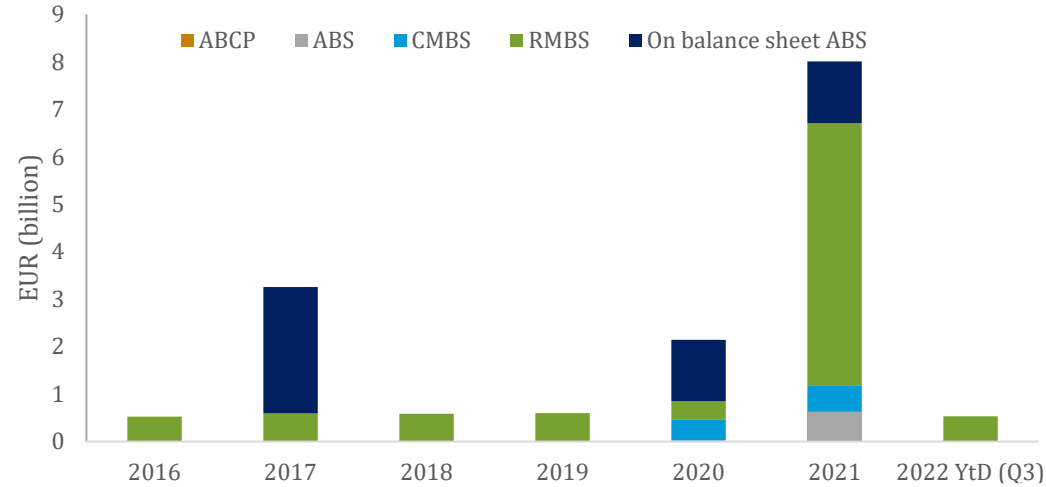


**2.16 European Sustainable-linked Bond Issuance by Deal Type: 2022 YtD (Q3)**

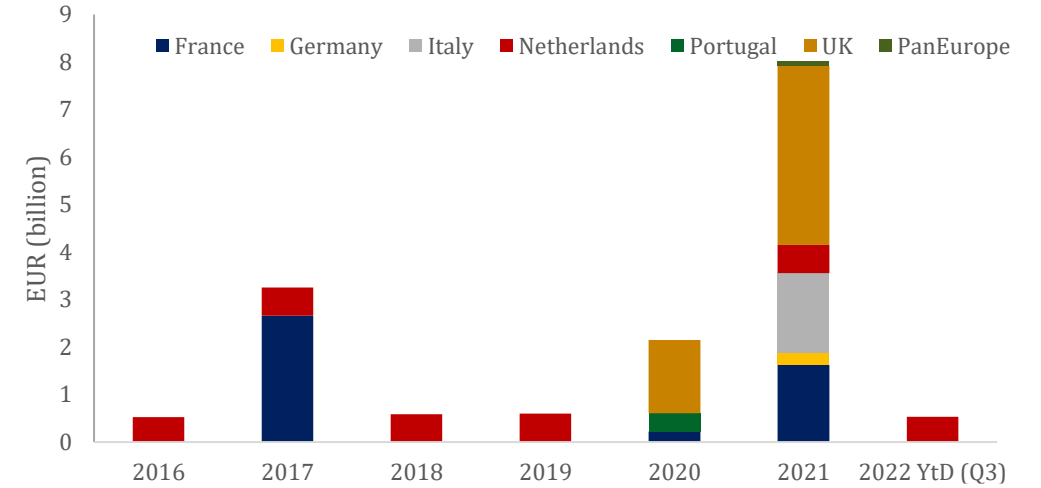


Source: Dealogic

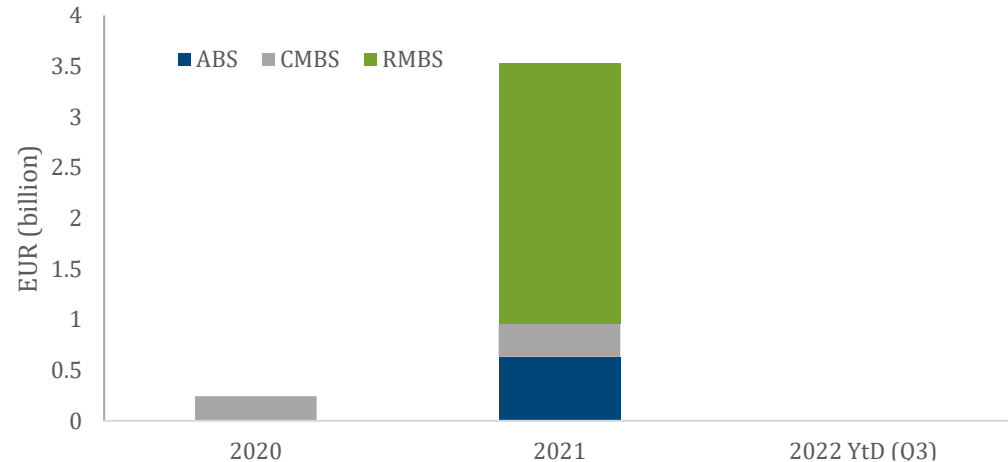
**2.19 European ESG Securitisation Issuance by Asset Class**



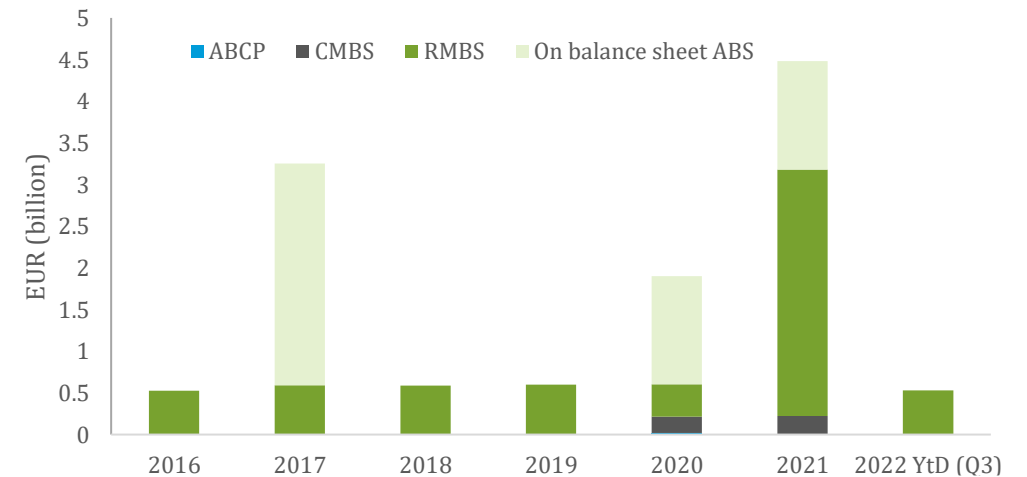
**2.20 European ESG Securitisation Issuance by Country**



**2.21 European Social and Sustainable Securitisation Issuance by Asset Class**



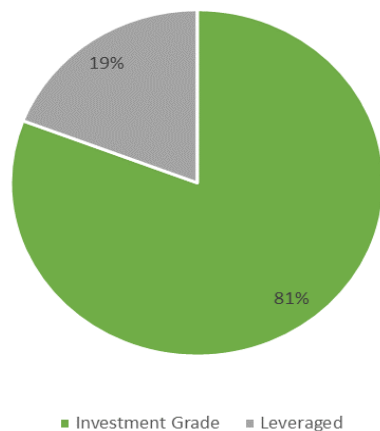
**2.22 European Green Securitisation Issuance by Asset Class**



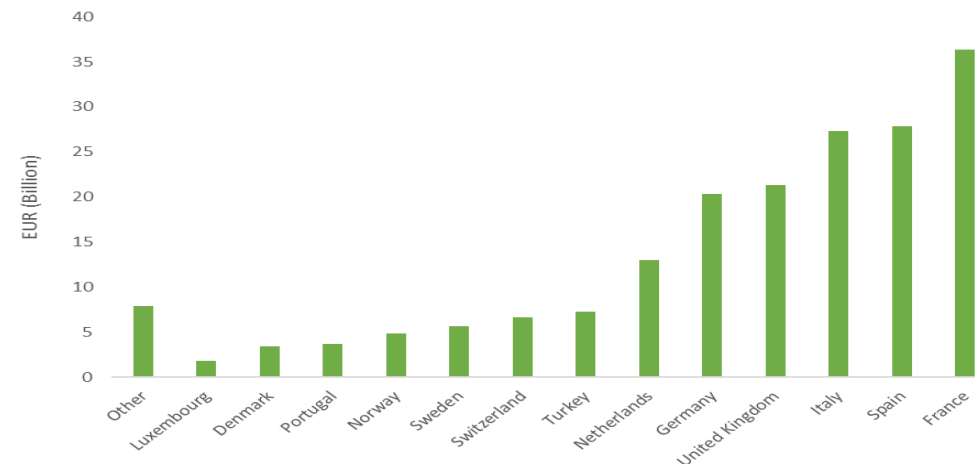
Source: Climate Bond Initiative, Credit Agricole, S&P, and European Data Warehouse

# ESG linked and Green Loan Issuance

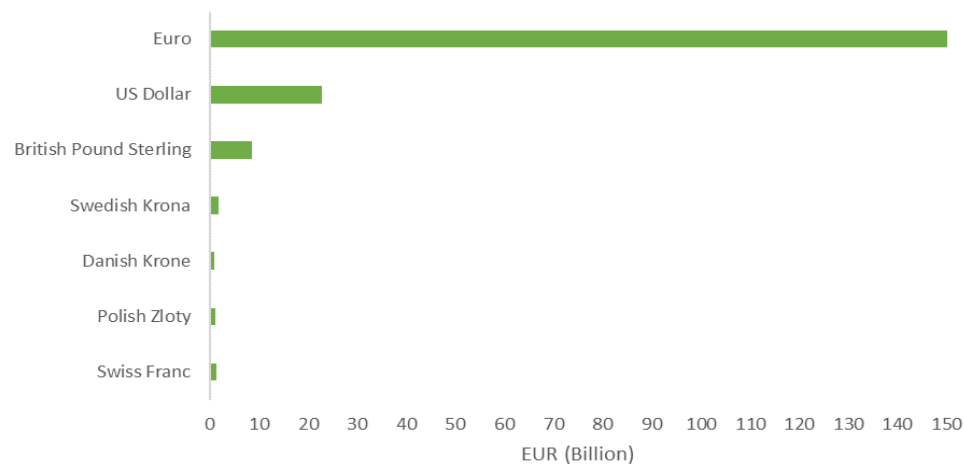
2.23 ESG linked and Green Loan Issuance by Deal Type: 2022 YtD (Q3)



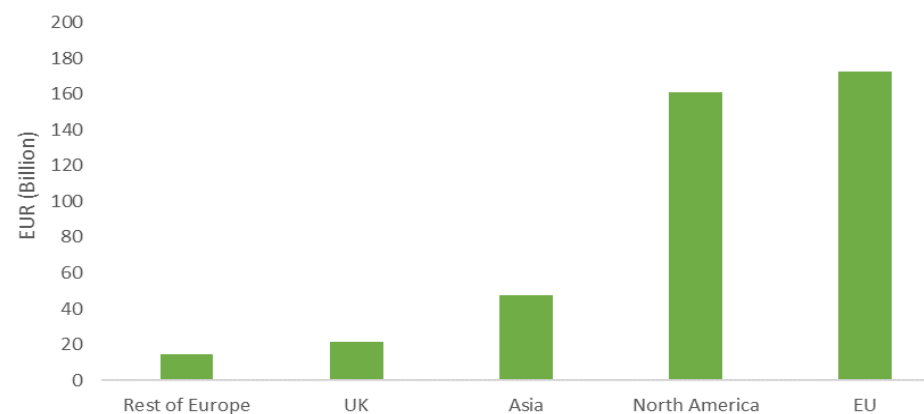
2.24 ESG linked and Green Loan Issuance by Country: 2022 YtD (Q3)



2.25 ESG linked and Green Loan Issuance by Currency: 2022 YtD (Q3)



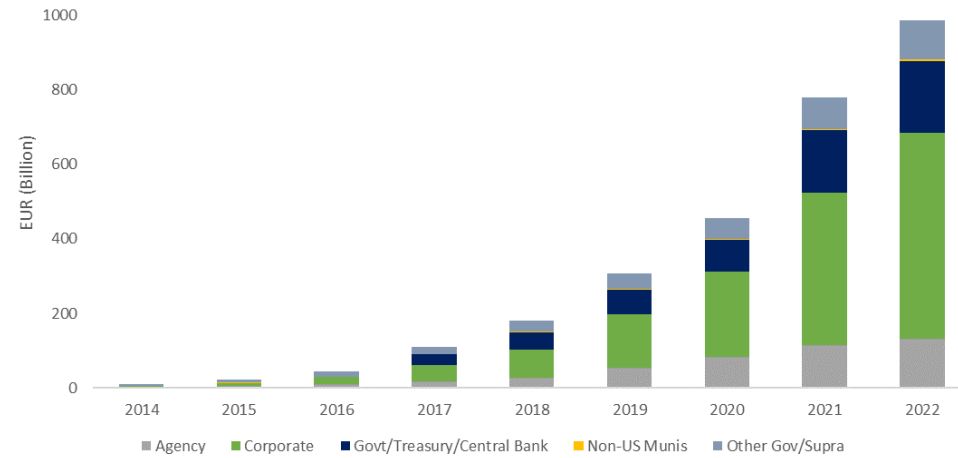
2.26 ESG linked and Green Loan Issuance Global Comparison 2022 YtD (Q3)



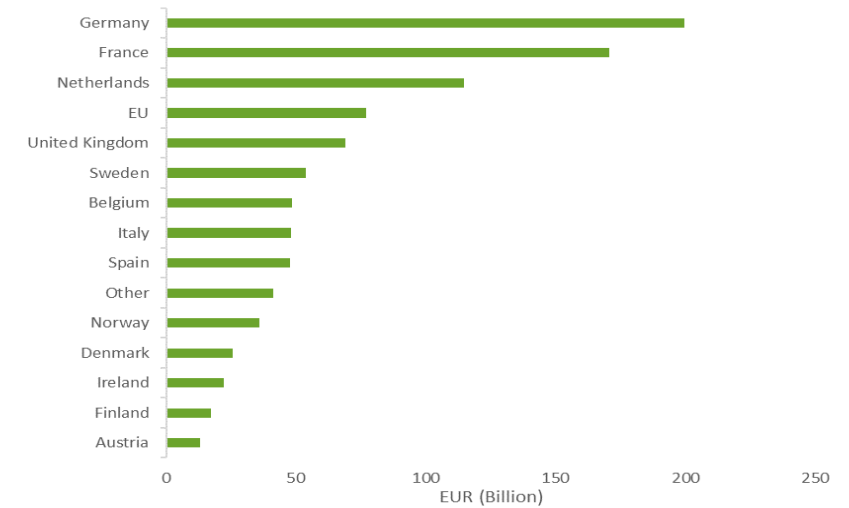
Source: Dealogic

# ESG Bonds Outstanding

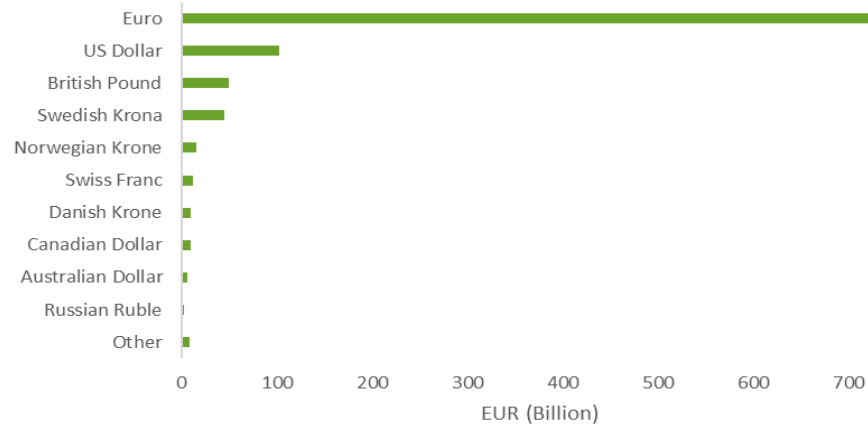
### 3.1 Evolution of European Green Bond Outstanding



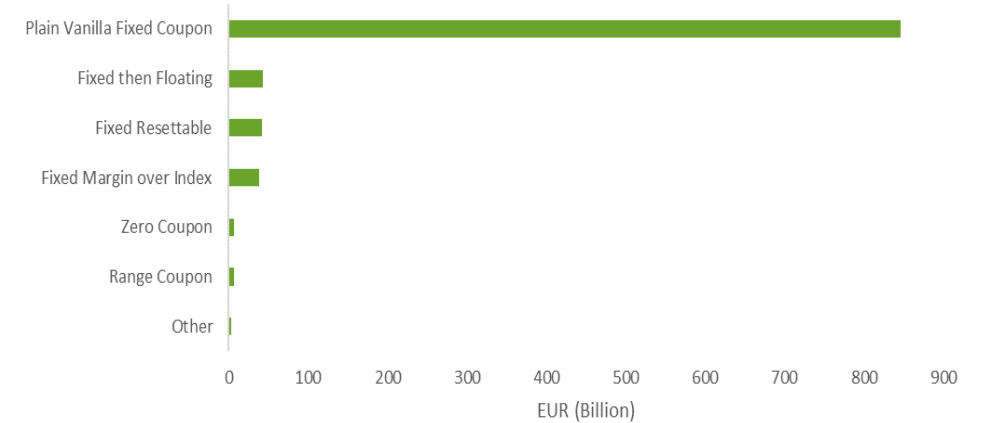
### 3.2 Green Bonds outstanding by Country



### 3.3 Outstanding Amount by Currency

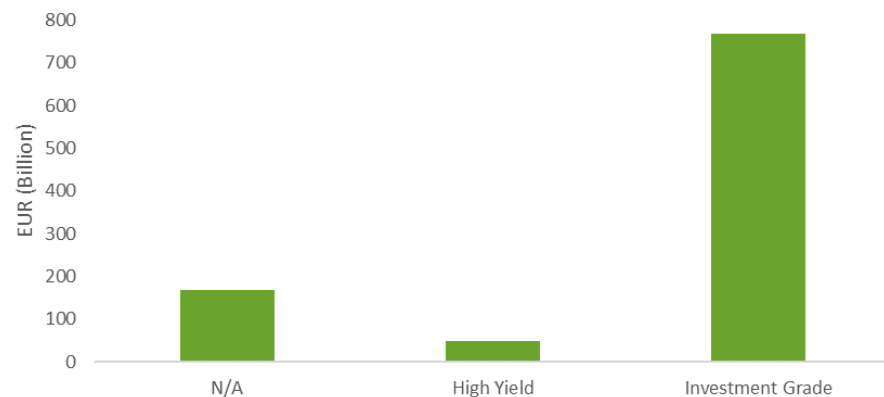


### 3.4 Outstanding Amount by Coupon Type

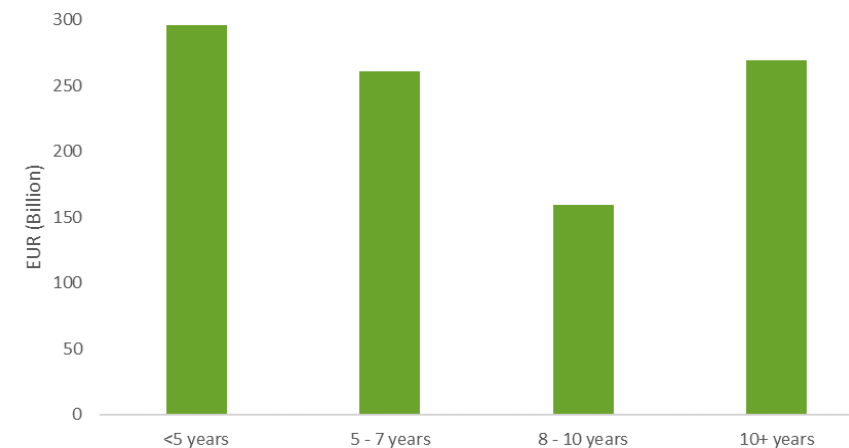


Source: Thomson Reuters Eikon

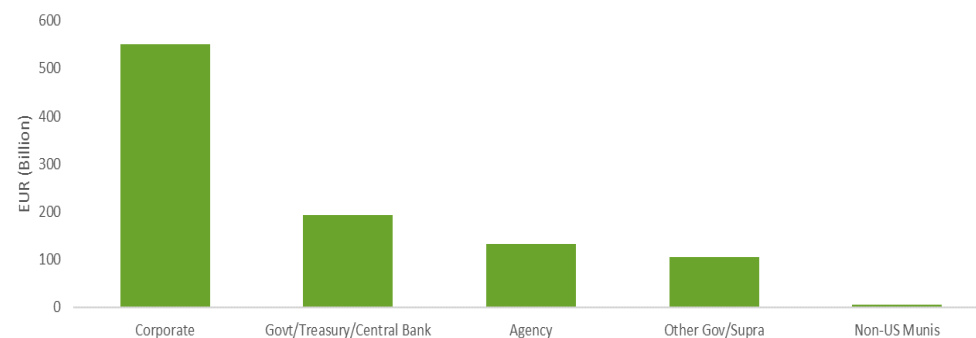
**3.5 Outstanding Amount by Bond Grade**



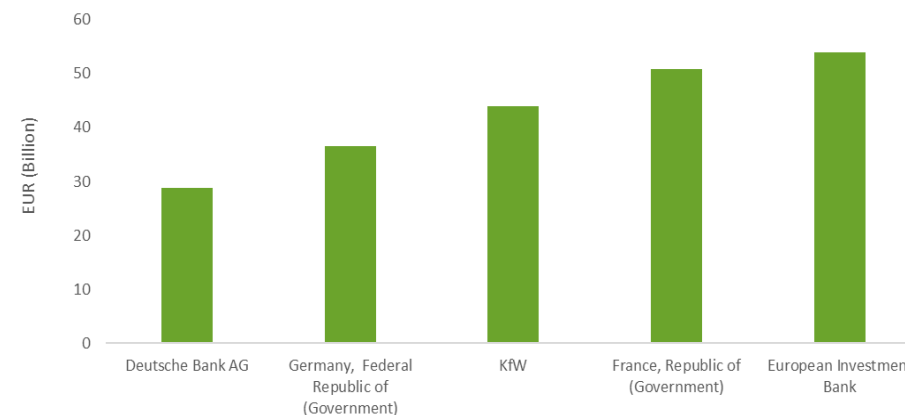
**3.6 Outstanding Amount by Years to Maturity**



**3.7 Outstanding Amount by Asset Class**

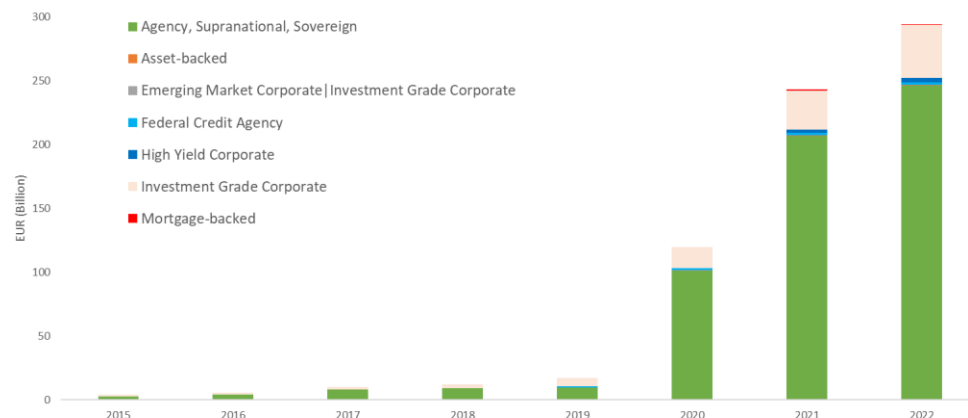


**3.8 Outstanding by Top 5 Issuers**

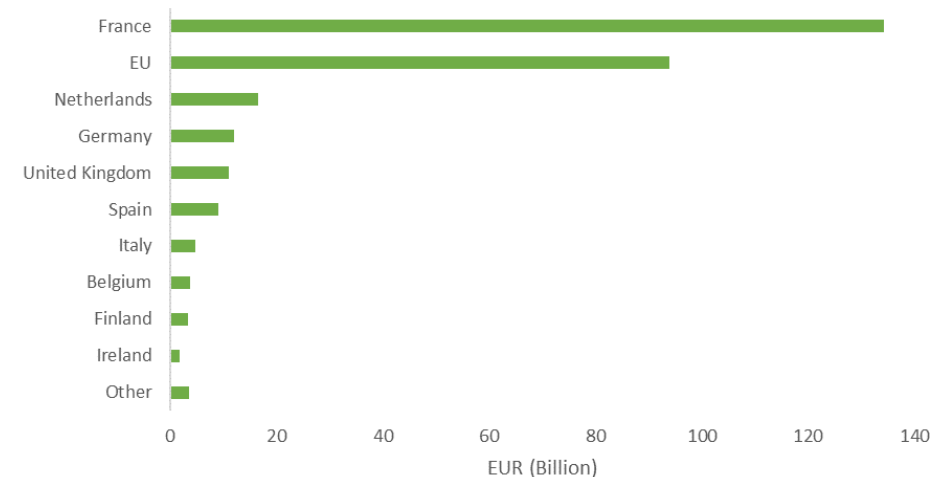


Source: Thomson Reuters Eikon

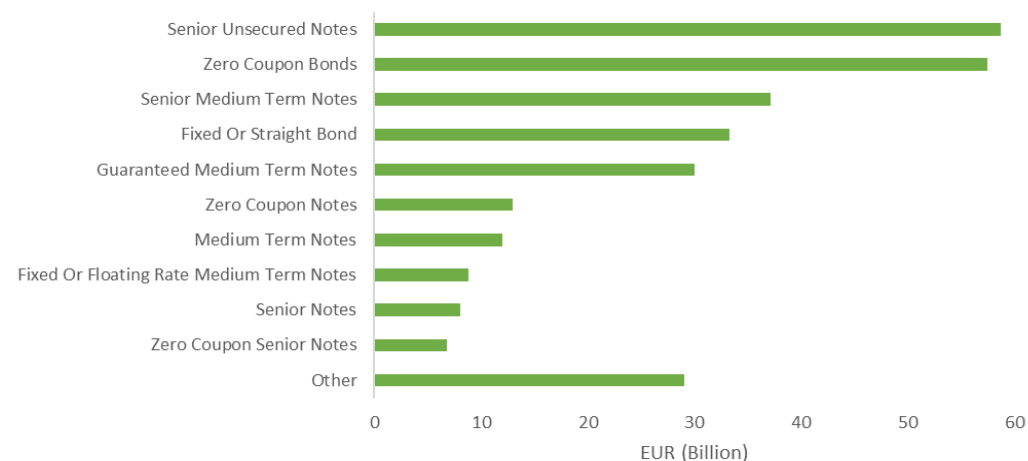
### 3.9 Evolution of Outstanding



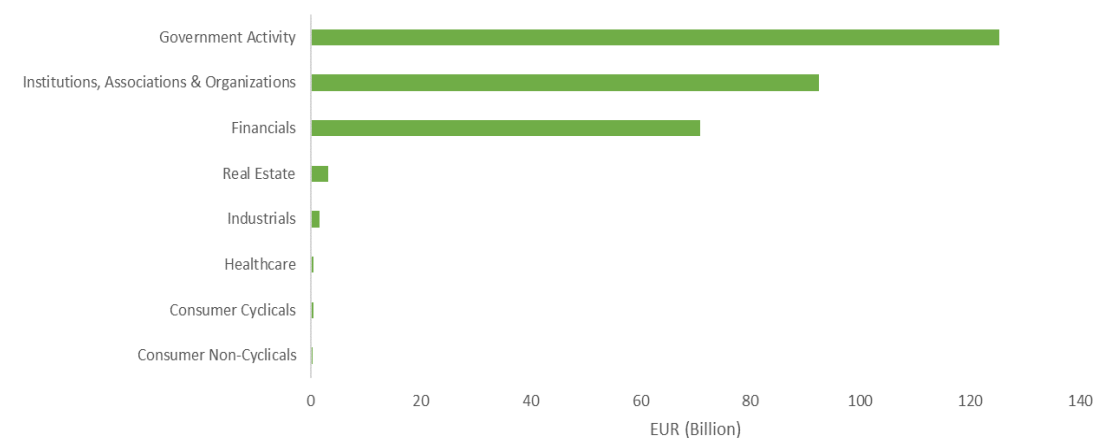
### 3.10 Outstanding Amount by Country



### 3.11 Outstanding Amount by Security Type



### 3.12 Outstanding Amount Issuer Economic Sector Type

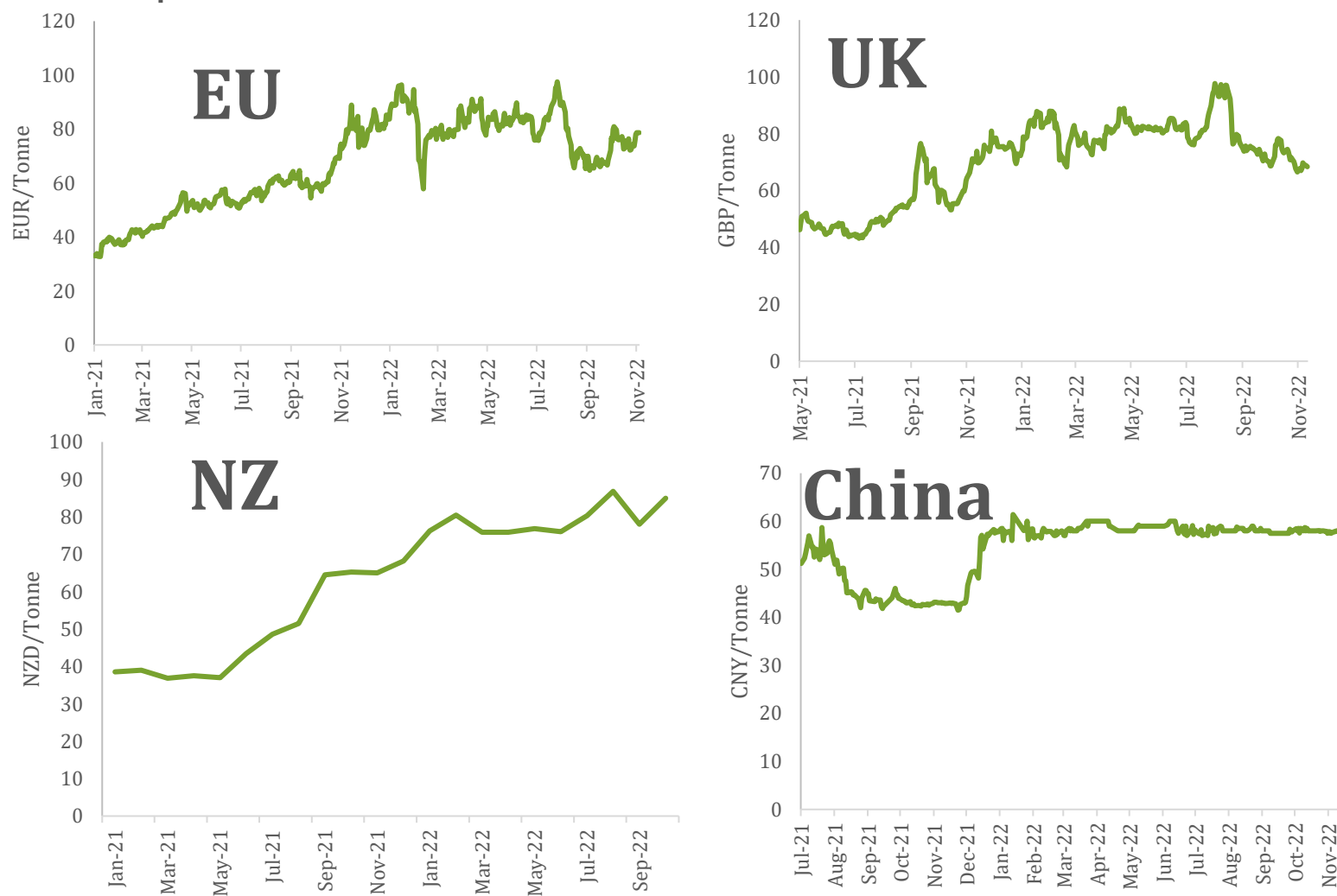


Source: Thomson Reuters Eikon



# Carbon pricing, emissions and trading

#### 4.1 Comparison of Global ETS Allowance Prices



Carbon prices have declined during Q3'22 in the EU, UK and New Zealand.

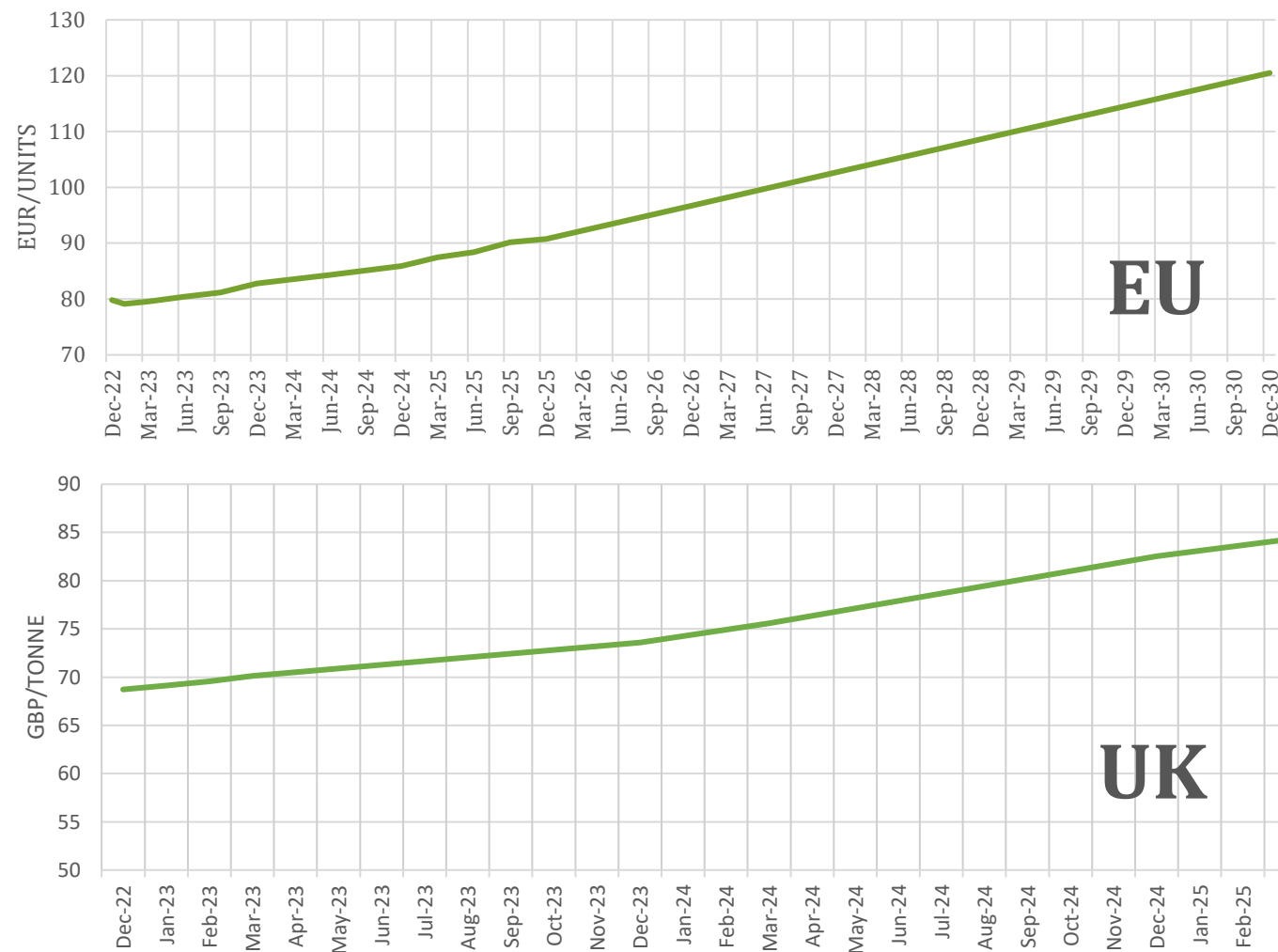
The European Union Allowance (EuA) price per metric tonne finalised Q3'22 at €66/Tn, from €80/Tn at the end of 2021.

During the first months of Q4'22, EuA spot prices have marginally increased to €78/Tn. A similar price performance has been observed in UK and NZ.

The Shanghai ETS price is the lowest among the main global ETS systems with a price per metric tonne of CNY58 as of Nov 2022 (€7.8/ Tonne) with minimal fluctuation during the year.

Prices may not be directly comparable across systems and vary greatly, given different institutional settings and differences in ETS design.

## 4.2 Forward curve: European Union Allowance (EUA) and UK Electronic Energy Future Chain Contract



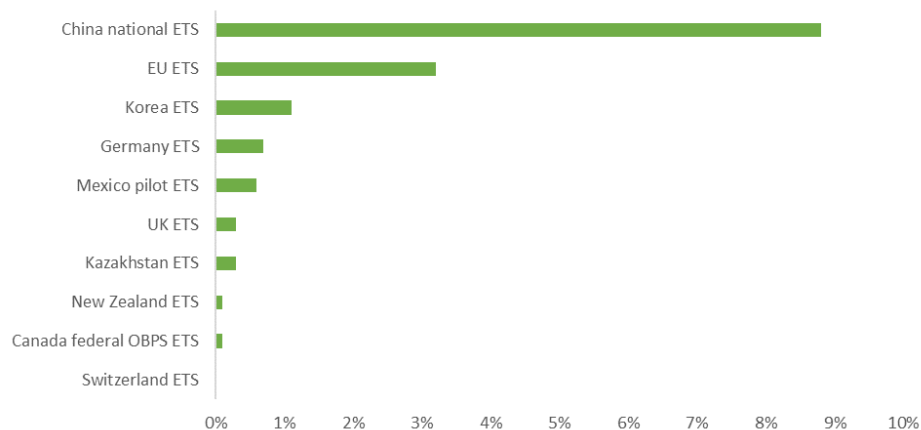
EU and UK forward curves anticipate price increases in carbon prices for the medium- and long-term.

Source: Eikon

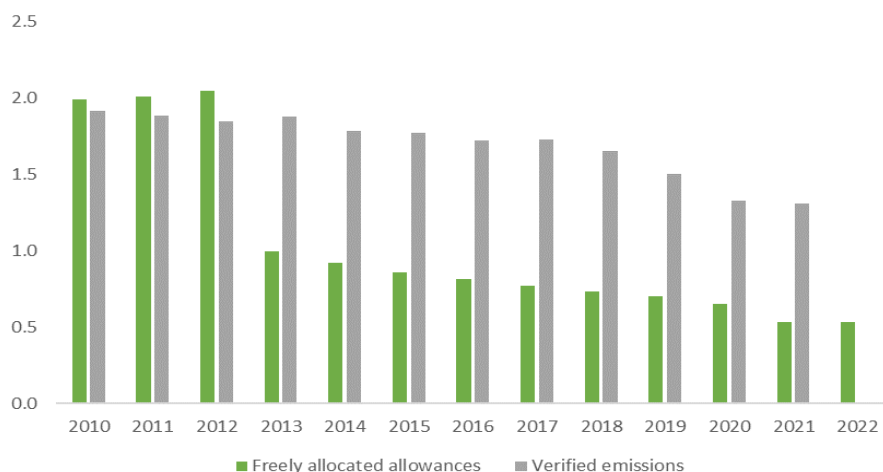
Market curves observed late Nov 2022

# Measurement of Carbon Emissions

## 4.3 Share of annual global GHG emissions (2022 YtD)



## 4.4 EU 27 + UK Allowance Vs verified Emissions



Source: European Environment Agency, The World Bank

As of July 1st, 2022, China had the largest emissions trading scheme, with a share of 8.80% of annual GHG emissions.

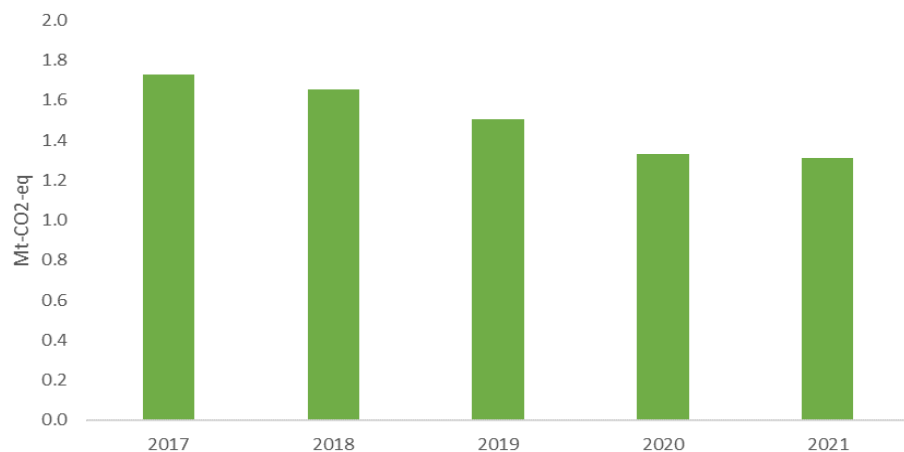
The European Union Emissions Trading System (EUETS) remains the second largest green house gas ETS globally, with a share of 3.20%.

The third largest ETS globally is the Korea ETS, with a share of 1.10%.

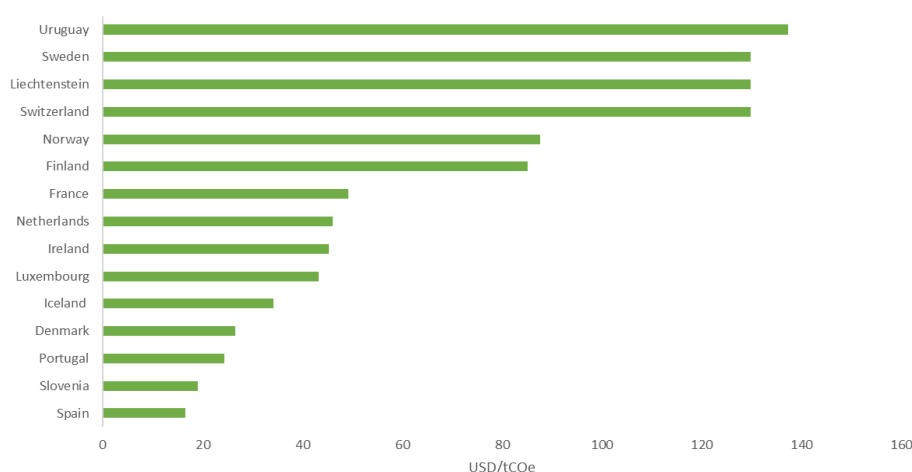
EU+UK verified emissions have continuously decreased since 2013.

# Carbon Pricing – Allowance & Tax

## 4.5 Allowances auctioned or sold (EUAs and EUAAs)



## 4.6 Carbon Tax by Country (2022)



Source: European Environment Agency, The World Bank

The EU ETS involves a cap being set on the total amount of certain greenhouse gases that can be emitted by companies covered by the system. The cap is reduced over time so that total emissions fall.

Within the cap, companies receive or buy emission allowances, which they can trade as needed. The limit on the total number of allowances available ensures that they have a value.

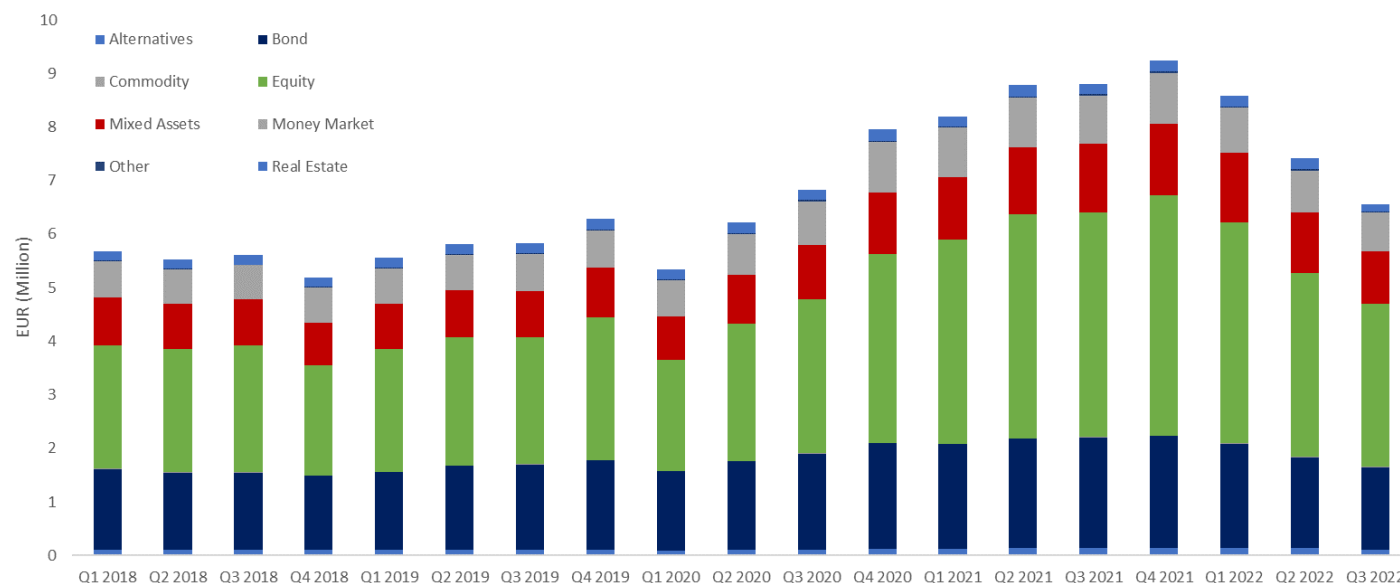
Every year a company must surrender enough allowances to cover all its emissions. If a company reduces its emissions, it can keep the spare allowances to cover its future needs or sell them to another company that is short of allowances.

Total allocated allowances (EUA and EUAA) continued to decrease from 1349.73 MtCO<sub>2</sub>-eq in 2020 to 1004.47 MtCO<sub>2</sub>-eq in 2021.

Carbon Taxes are another method of carbon pricing. Uruguay currently has the highest carbon tax globally at 137.3 USD/tCO<sub>2</sub>e. The country with the second highest carbon tax is Sweden, at 129.89 USD/tCO<sub>2</sub>e.

# Fund Management

### 5.1 Global ESG Funds by Asset Class (USD tn)



Global ESG Funds continued to decrease during Q3'22.

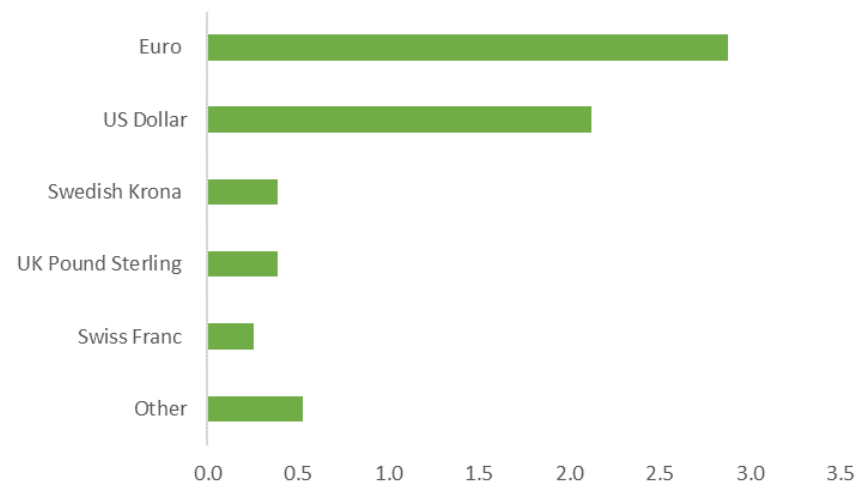
Funds with an ESG mandate (including Mutual Fund and ETFs) totalled \$6.5tn as of Q3'22, a 12% decrease from Q2'22 and 26% decrease from Q3'21.

All asset classes fell during the quarter, with the largest quarterly declines in Alternatives (-21%) and Real Estate (-34%).

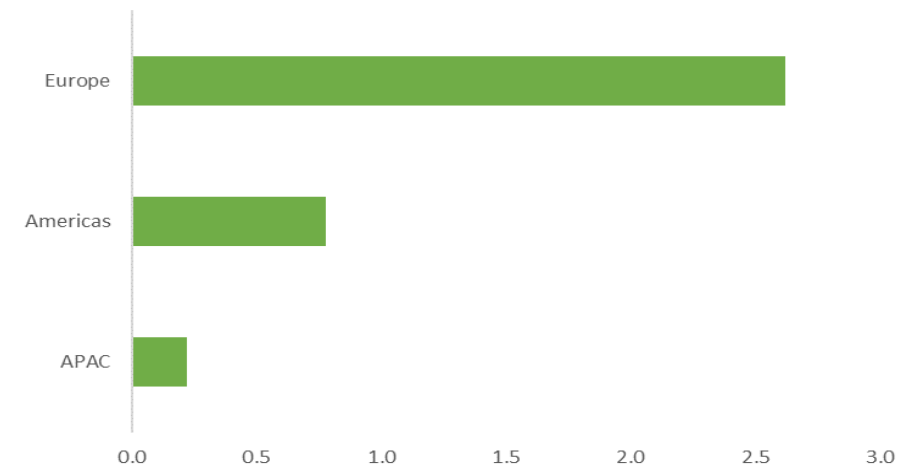
The YtD decline in ESG funds has been driven predominantly by lower valuations. As observed in chart 5.4, outflows from ESG funds have accumulated a total of \$132bn during the year, or 5% of the decline in Global ESG funds.



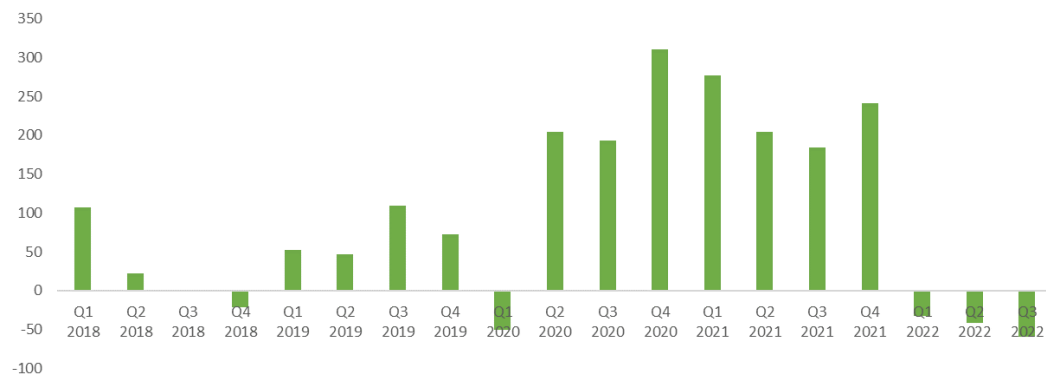
**5.2 Global ESG Funds by currency base (USD tn)**



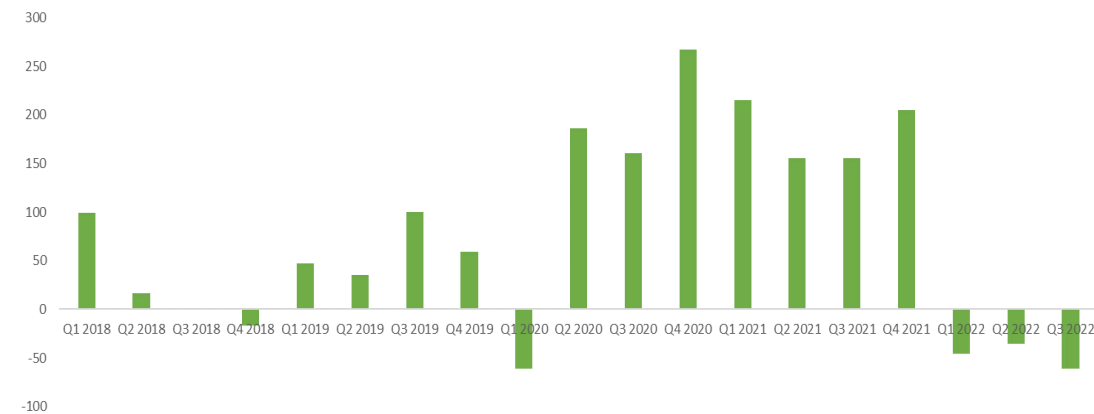
**5.3 Global ESG Funds by geographical location (USD tn)**



**5.4 Global ESG fund flows (\$bn)**



**5.5 European ESG fund flows (\$bn)**

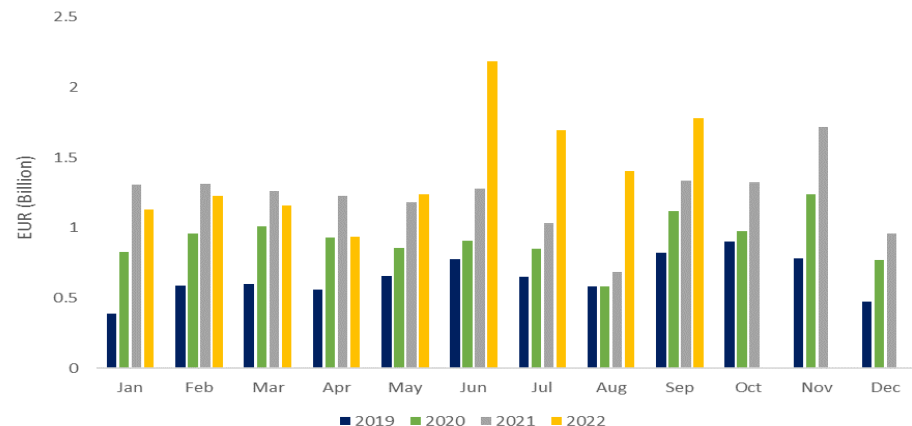


Source: Lipper, Eikon

# ESG Bond Trading

# ESG Bond Trading Volumes

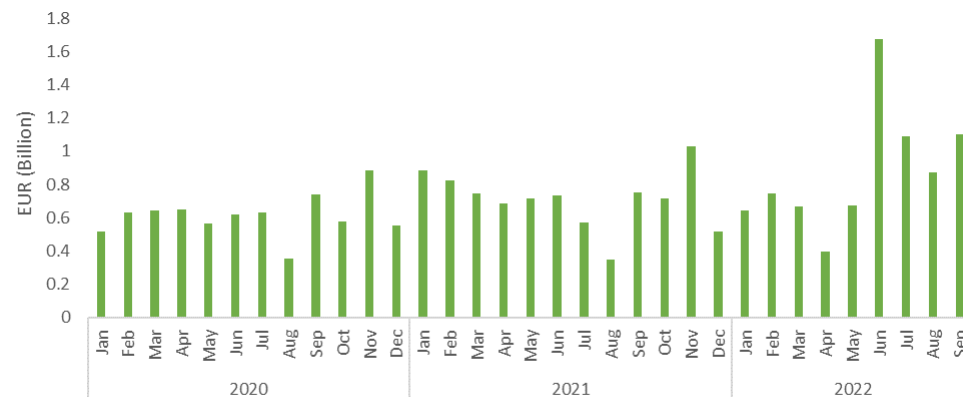
**6.1 European ESG Bond Average Daily Trading Volumes (all issuers)**



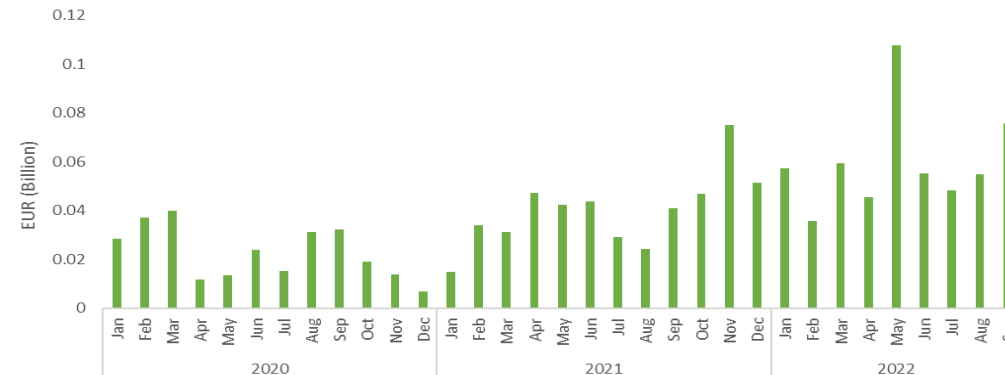
**6.2 Average Daily Trading Volumes: European ESG Corporate Bonds**



**6.3 Average Daily Trading Volumes: European ESG Government, Agency, Supranational, and Sovereign Bonds**



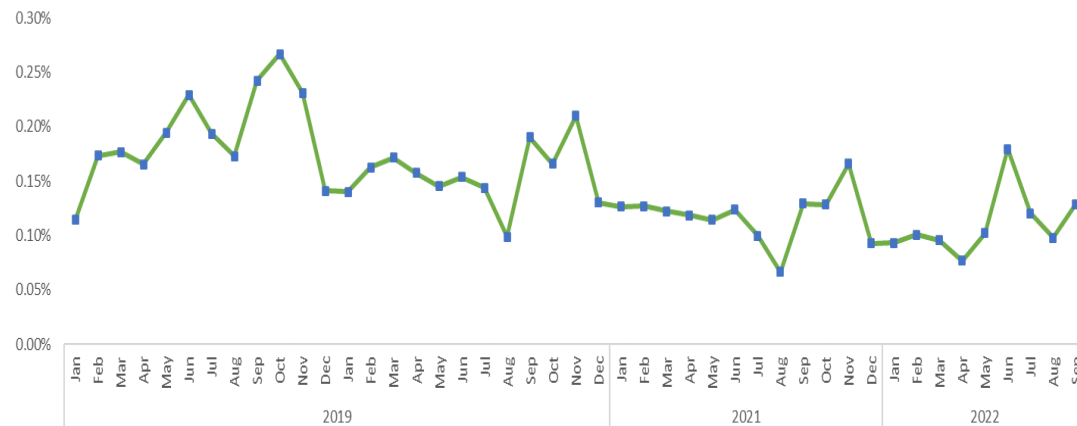
**6.4 Average Daily Trading Volumes: European ESG ABS and Covered Bonds**



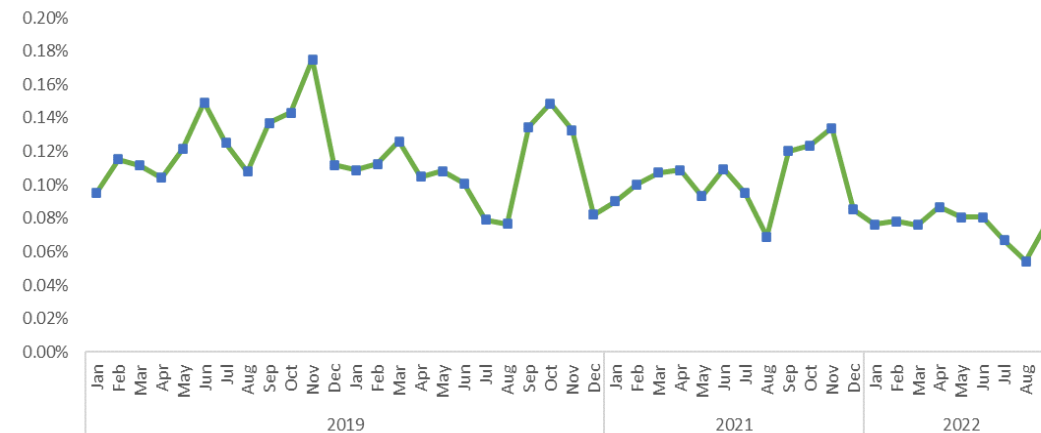
Source: Trax

# ESG Bond Turnover Ratios

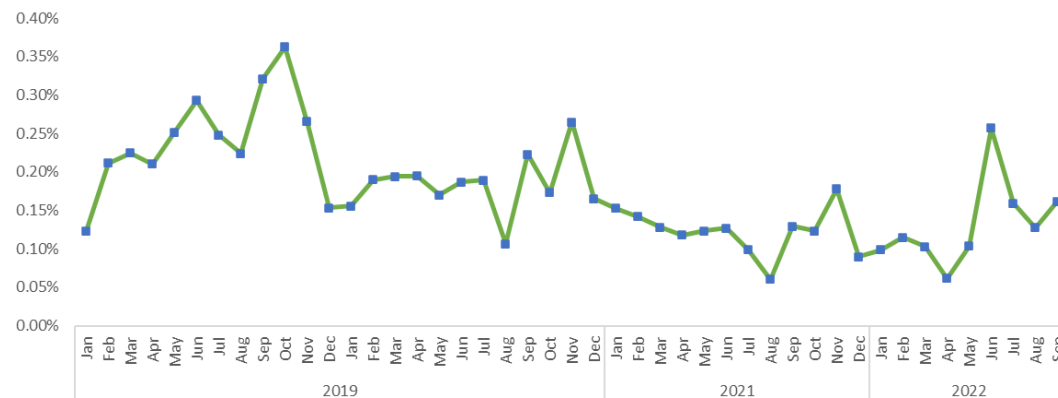
6.5 European ESG Bond Turnover Ratio (all issuers)



6.6 Turnover Ratio: European ESG Corporate Bonds



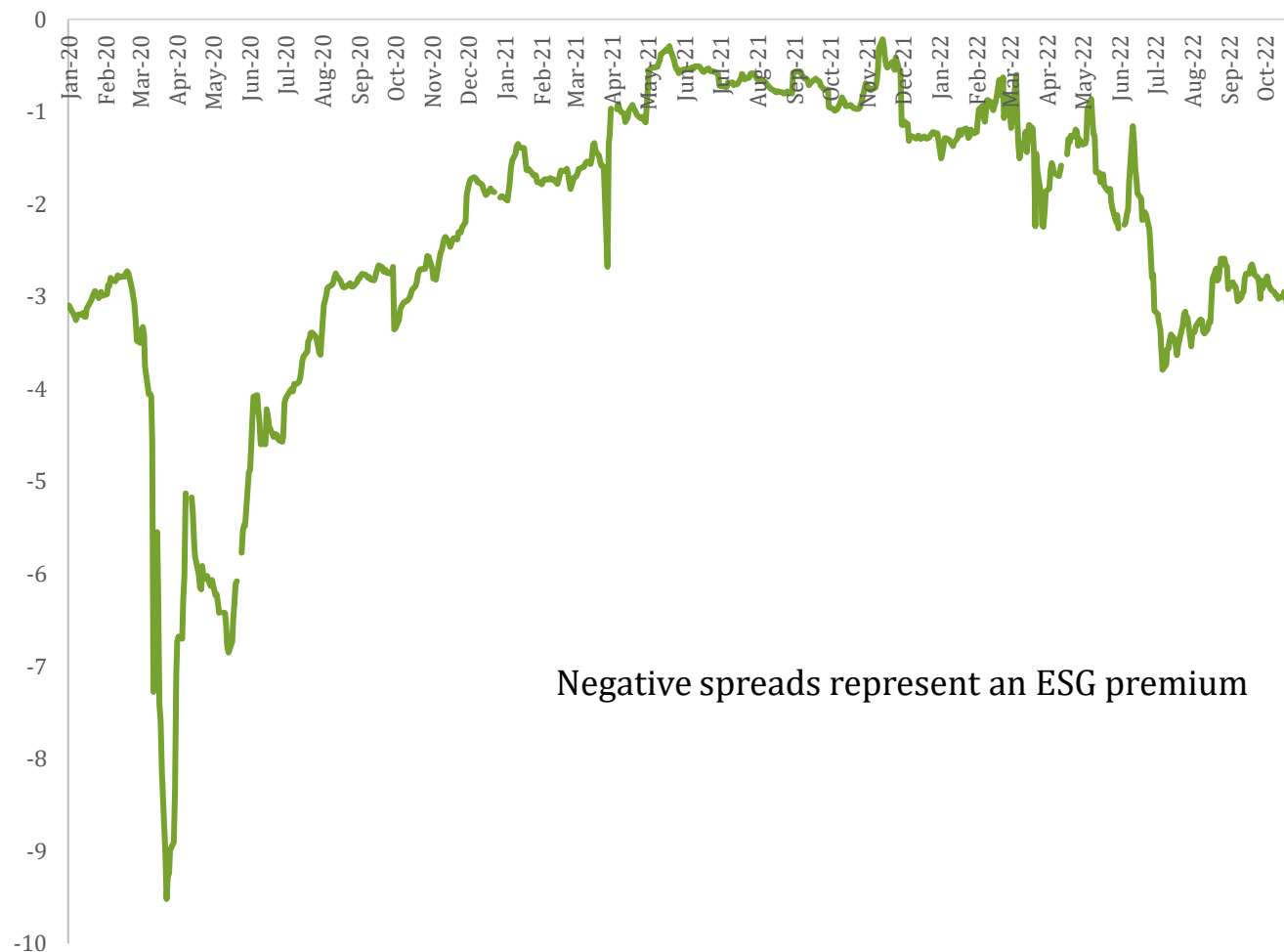
6.7 Turnover Ratio: European ESG Government, Agency, Supranational, and Sovereign bonds



\* Turnover Ratio has been calculated by dividing the outstanding amount by the average daily trading volume

# Valuations

## 7.1 Spreads (OAS) of EUR-denominated corporate ESG bonds against non-ESG corporate benchmarks (bps)

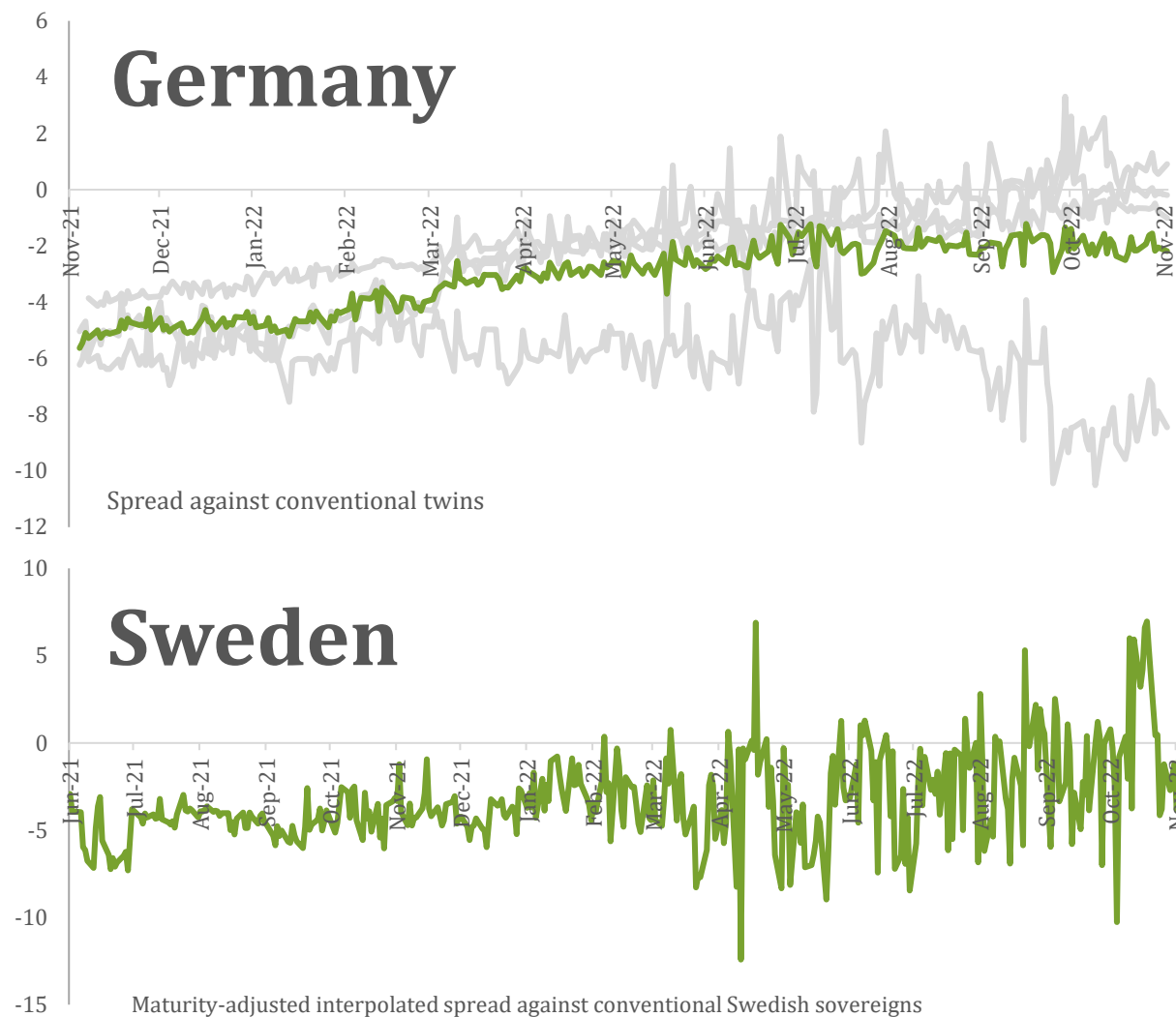


Spreads of corporate ESG bonds against non-sustainable benchmarks have widened in the second half of the year from c1bps at the start of the year to c3bps in September 2022.

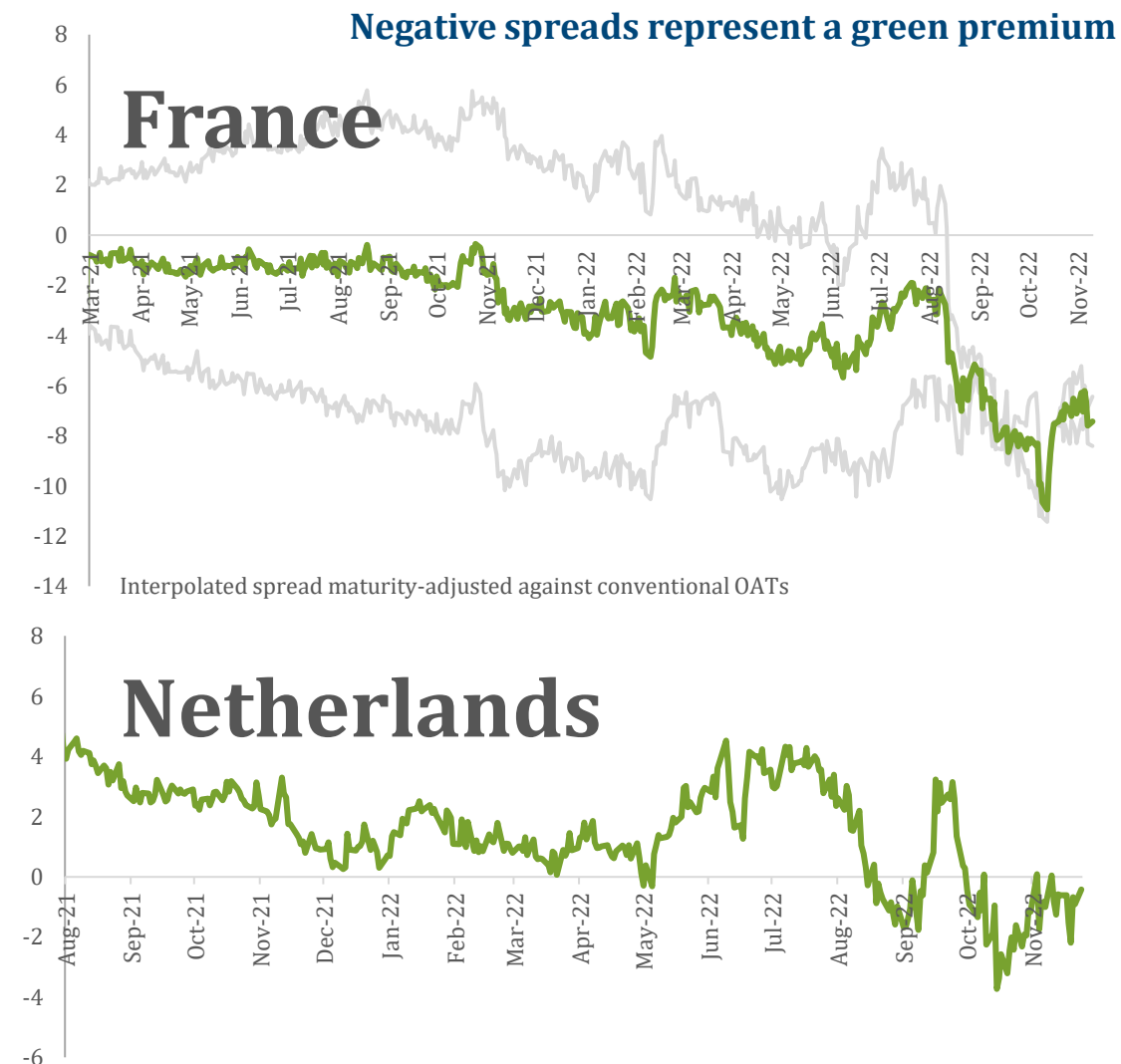
As shown on pages 36 and 37, the green premia (i.e. greenium) for sovereign bonds varies by issuer and by instrument, suggesting that in addition to the sustainability features of the sovereign benchmarks, other technical factors such as liquidity may influence yield premia against conventional bonds.

As shown on chart 7.2, the greenium spreads of French, Dutch and some of the German green bond references have widened by between 2 to 4 bps during the year.

## 7.2 Spreads of sovereign green bonds against conventional reference (bps)



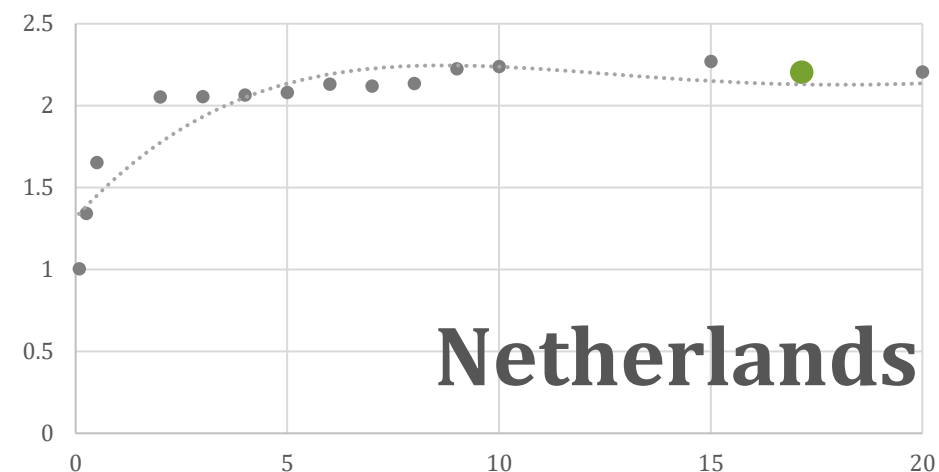
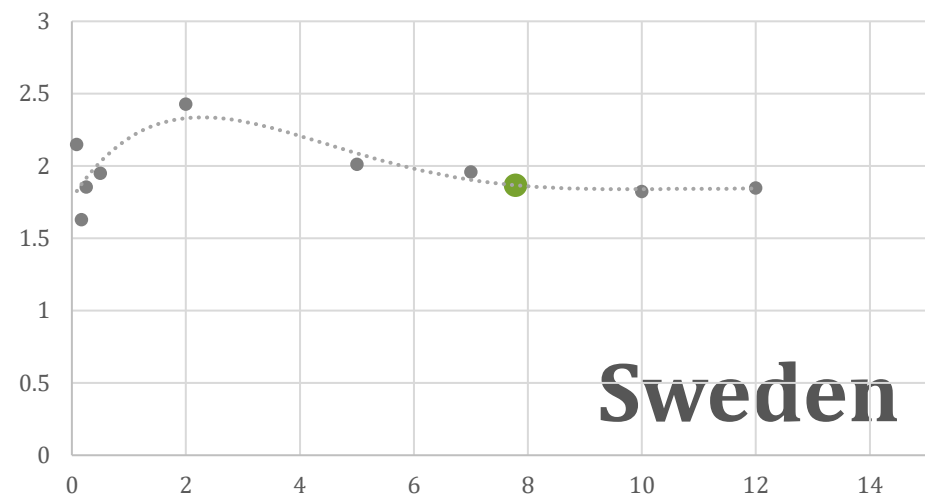
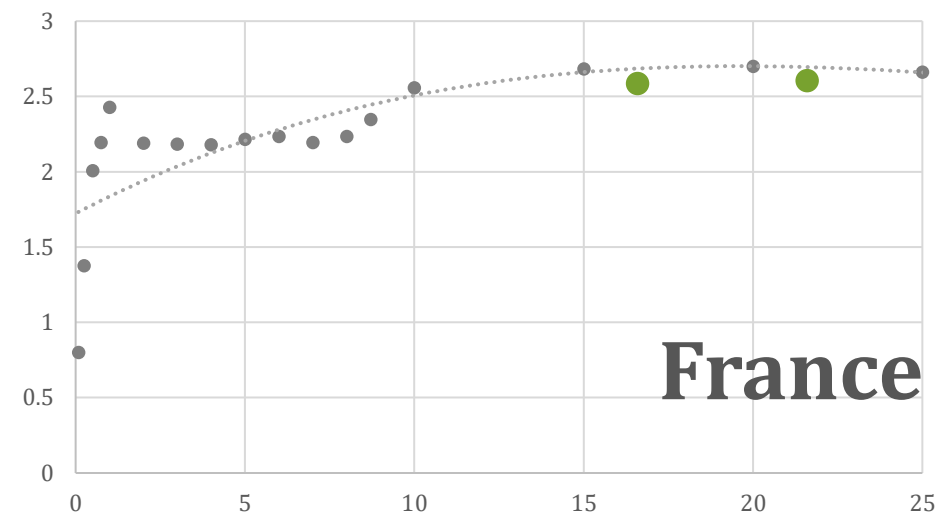
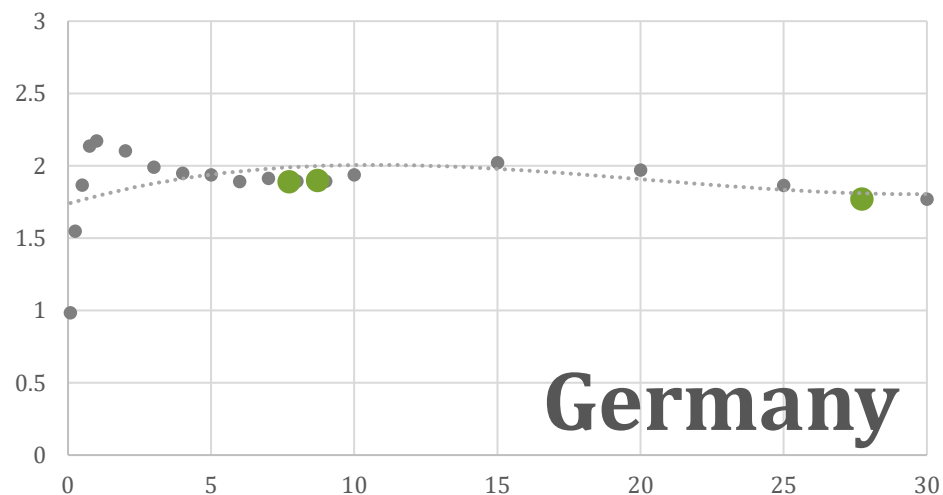
Source: Eikon and Datastream



Maturity-adjusted interpolated spread against conventional Dutch sovereigns



## 7.3 Sovereign yield curves and yields for selected green sovereign bonds. 29 Nov 2022



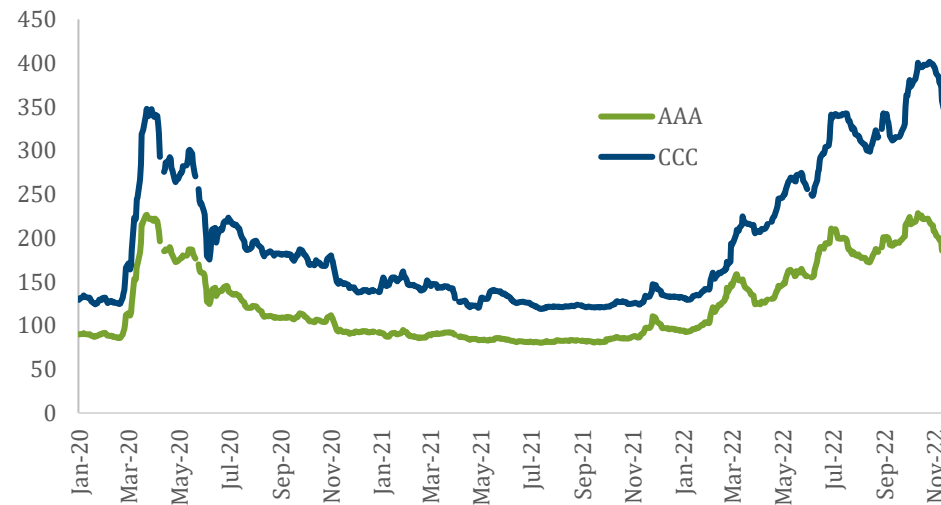
Source: Eikon. Selected green references highlighted in green

# ESG Bond Spreads

**7.4 ESG EUR Corporate spreads (OAS, bps)**

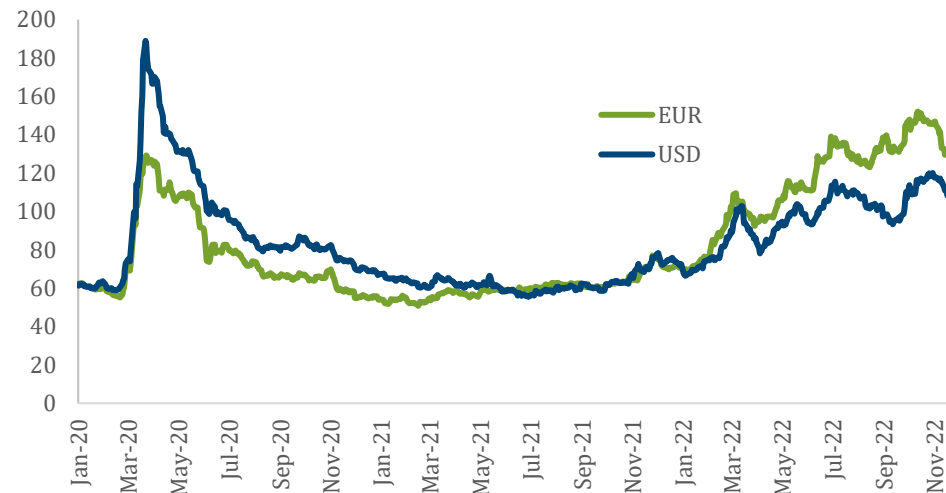


**7.5 EUR corporate spreads by ESG rating (OAS, bps)**



Source: Barclays and Bloomberg

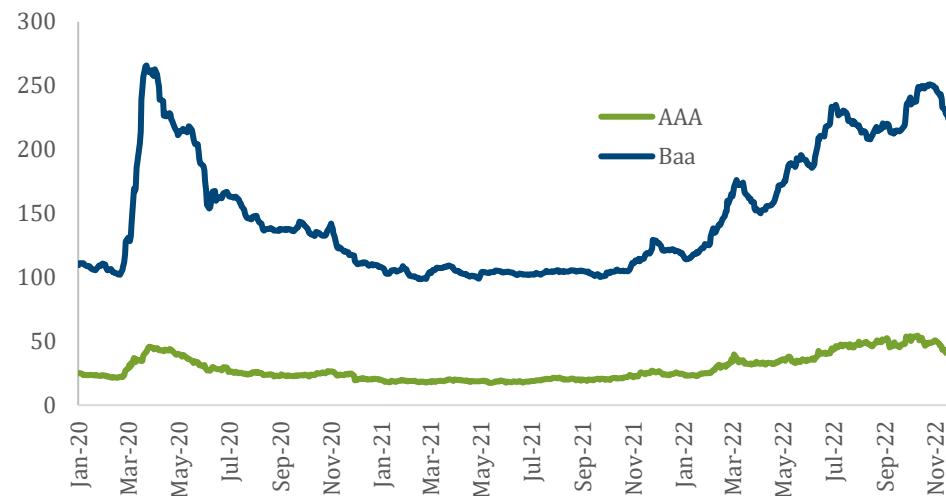
**7.6 Green bond spreads by currency (OAS, bps)**



**7.7 EUR Corporate green bond spread (OAS, bps)**



**7.8 Global Green bond spreads by credit rating (bps)**



Source: Barclays and Bloomberg

**7.9 MSCI Europe SRI Net Index EUR and EUR STOXX 600 (1 Jan 2022=100)**



**7.10 STOXX Global ESG Environmental Leaders**



**7.11 STOXX Global ESG Governance Leaders**



**7.12 STOXX Global ESG Social Leaders**



Source: Eikon, STOXX, MSCI

**Green Bonds:** Green bonds fund projects that have positive environmental and/or climate benefits. Most of the green bonds issued are green “use of proceeds” or asset-linked bonds. Proceeds from these bonds are earmarked for green projects but are backed by the issuer’s entire balance sheet. There are also green “use of proceeds” revenue bonds, green project bonds and green securitized bonds. The Green Bond Principles (GBP) are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond.

**Carbon Pricing:** Carbon pricing is an instrument that captures the external costs of greenhouse gas (GHG) emissions—the costs of emissions that the public pays for, such as damage to crops, health care costs from heat waves and droughts, and loss of property from flooding and sea level rise—and ties them to their sources through a price, usually in the form of a price on the carbon dioxide (CO<sub>2</sub>) emitted. Carbon pricing can take the form of a carbon tax or fee, or a cap-and-trade system that depends on government allotments or permits.

**ESG:** ESG stands for Environmental Social and Governance. It refers to the three key factors when measuring the sustainability and ethical impact of an investment in a business or company.

**ETS:** Emissions trading system is a market-based approach to controlling pollution by providing economic incentives for reducing the emissions of pollutants. The EU emissions trading system (EU ETS) is a cornerstone of the European Union's policy to combat climate change and its key tool for reducing industrial greenhouse gas emissions cost-effectively

**EUA:** A European Union allowance (EUA) is the official name for Europe’s emission allowances, which in 2008 was defined as the official Kyoto allowance for countries in the EU. One EUA entitles the holder to emit one ton of carbon dioxide or carbon-equivalent greenhouse gas.

**Europe:** Countries included: Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Switzerland, United Kingdom.

**Social Bonds:** Social Bonds are bonds’ whose proceeds are used to raise funds for new and existing projects that tackle a specific social issue and/or seek to achieve positive social outcomes. The reference framework for issuance of Social Bonds is the Social Bond Principles (SBP). The SBP promote integrity in the Social Bond market through guidelines that recommend transparency, disclosure and reporting. Social objectives may include, but are not limited to affordable housing, affordable basic infrastructure, employment generation and sustainable food systems.

**SRI:** Socially responsible investing or SRI, is a strategy that emphasizes not only the financial gains from an investment but also ethical or social change.

**Sustainable Bonds:** Proceeds of Sustainable Bonds are split between green projects and social projects.

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